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Attitudes, Behavioral Intentions, and Migration: Resident Response to Amenity Growth-Related Change in the Rural Rocky Mountain West

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ATTITUDES, BEHAVIORAL INTENTIONS, AND MIGRATION: RESIDENT RESPONSE TO AMENITY GROWTH-RELATED CHANGE IN THE RURAL ROCKY MOUNTAIN WEST

by

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ABSTRACT

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This paper explores the demographic, economic, political, and environmental characteristics that have helped define the "New West," reviews studies on individual attitudes and participation in response to these changes, and presents findings and conclusions from an analysis of two study areas: Bear Lake and Star Valley. Results suggest that residency status is generally not a significant predictor of resident attitudes towards aspects of community change. Non-residency status factors, such as high levels of place attachment, knowledge about community affairs, values for property ownership, and community satisfaction, were generally more influential upon residents' attitudes. Significant predictors of resident involvement in community affairs differed based on how involvement was measured; self-reported involvement in political affairs was most strongly predicted by permanent resident status, local social connections, knowledge of community affairs, and place attachment, while resident intention to participate in

community affairs was positively correlated with greater personal efficacy, knowledge of community affairs, past leadership recruitment, place attachment, and altruistic motivation. Predictors for intention to participate also differed based on whether participation was measured by action type or by issue. Measuring participation by the type of action focused predictors on the skills, incentives, and resources needed to achieve those actions. Grouping participation by the type of issue, however, focused predictors on the characteristics that differentiated residents with regard to issue relevance. Out-migration, as an alternative to participatory action, was only predicted by non-economic factors. Additionally, the relationship between attitudes and behavioral intentions was only weakly predicted based on attitude ambivalence and specific scenarios.

Study results highlighted several methodological considerations for future attitude and participatory studies. Use of general attitudinal statements may have yielded inflated response scores and therefore may not translate to shared acceptability of specific management decisions or trade-offs. This study also explored the notion of behavioral intentions as a means of identifying residents' "ideal" tendency for involvement. Local community leaders may be able to improve resident public participation by utilizing these findings to provide a shared goal for action, identifying appropriate audiences for specific issues, and recognizing how different participatory methods may yield obstacles and opportunities for resident involvement.

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Susan R. Wilmot

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CHAPTER 1

INTRODUCTION

Rural communities across the Rocky Mountain West are facing a series of concurrent, novel changes, including rising second home development, increasing tourism and recreation demands, new socio-demographic trends, population growth, and economic shifts (Beyers and Nelson 2000, Smutny 2002). A community's ability to manage these changes successfully is a function of several different elements: 1) individual and group attitudes about change and residents' willingness or ability to participate in, and influence, community decision-making processes (Greider and Little 1988); 2) community characteristics such as size, spatial distribution, financial and physical resources, local autonomy, and social capital (Parisi et al. 2004, Tolbert et al. 2002); and 3) third-party impacts, such as changing public land agency rules and regulations (Steelman et al. 2004).

The purpose of this study is to explore the role that individual attitudes and participatory behaviors play in shaping community response to amenity-growth related change, in particular second home development. Attitudinal studies have become increasingly common tools for exploring community conflict concerns resulting from differing identities and values about community goals, development pace, and resource allocation held by residents in Western communities (Jobes 1995, Price and Clay 1980). Increased understanding of residents' attitudes and areas of agreement and disagreement can provide local government officials and land use planners with additional resources to help minimize chances of conflict, improve the efficacy of land use planning activities,

and facilitate an acceptable future for all residents of the community. The rise of second home development in rural communities across the U.S. has further highlighted a need for attitudinal research, as leaders work towards understanding the impact of burgeoning seasonal resident populations on rural communities and whether the views of this group matter to land use decisions.

While studies documenting attitudinal differences and the economic and social consequences of seasonal and newcomer residency on community well-being are increasingly prevalent (e.g., Cho et al. 2003, English et al. 2000, Smith and Krannich 2000), much less research has explored residents' involvement in amenity-growth related activities. Seasonal residents are often characterized as poorly integrated into local community decision-making processes, while newcomers are often portrayed as heavily resourced anti-growth activists (Eser and Luloff 2003, Green et al. 1996, Walker 2003). Taking a closer look at the socio-demographic, social, and contextual variables that influence resident tendency toward participatory action should reveal a more nuanced understanding of the factors promoting or inhibiting public involvement for all residents. Interacting factors of resource availability, motivation, social interaction, political orientation, and place attachment have all been posited to impact political participation. Improving our knowledge of participatory barriers and opportunities may allow local government officials to enhance existing public participatory processes or develop novel approaches that better address community members' interests and needs. Residents may also choose to move out of the community rather than attempt to address the negative impacts from amenity-based growth. This out-migration behavior, if based on a loss of

non-economic benefits such as quality of life or environmental amenities, may reflect a new migration pattern that differs from previous natural resource dependency studies.

In order to address these topics, the following questions are set forth to guide my research in Bear Lake and Star Valley communities:

1) To what extent do residents differ in their attitudes about population growth, land use change, and opportunities for economic development by residential status (permanent versus seasonal and non-residents)?
2) Do resident attitudes about amenity-based growth predict their inclination for participation in community decision-making processes? Community decision-making processes are defined as direct and indirect political actions that seek to address aspects of amenity growth-related change in rural communities.
3) What social, economic, political, or psychological variables best predict resident intention to participate in community decision-making activities?
4) What is the relationship between residents' intention for involvement in community affairs and their actual self-reported involvement in community political activities?
5) What economic, social, political, attitudinal, or environmental variables best predict the likelihood of resident movement out of the community in response to amenity-growth related change?
6) How can rural Rocky Mountain community leaders build or expand participatory processes to improve permanent, seasonal, and non-resident involvement?

A multi-methodological approach is used to address these research questions for two study areas in the Rocky Mountain West: Bear Lake Valley in Utah and Idaho, and Star Valley in Wyoming. Chapter 2 provides a literature review of the phenomenon of

amenity growth-related change and the rise in seasonal homeownership across the Rocky Mountain West. Chapter 3 provides an in-depth discussion of the methodological approach, measurement, and analysis techniques used in this dissertation. Chapter 4 provides research findings and discussion of individual attitudes towards community social, economic, and landscape transformations. Chapter 5 explores predictors of public involvement in the context of Bear Lake Valley and Star Valley and reports findings and conclusions. Chapter 6 examines the relationship between resident attitudes and inclination for participation in community affairs. Chapter 7 looks at factors shaping out-migration decisions. Finally, Chapter 8 synthesizes research findings across all chapters and develops recommendations for expanding current participatory processes within the two study areas.

CHAPTER 2

LITERATURE REVIEW

Over the course of modern history, the Rocky Mountain West has experienced a series of cultural shifts that have reshaped the political, social, and economic identity of the land and its people. The rise of the West as a transnational space due to the union of the Central Pacific and Union Pacific at Promontory Point, its reemergence as the "old west," fueled by writers and the media in the late 19th and early 20th century, and as an idealized industrial future in the 1930s, serve as some examples (Taylor 2004). In the early 1990s, reports of a rapid population influx across much of the West, particularly focused in higher amenity locations, formed the basis for the "New West" literature. Brown et al. (2005a) found that from 1950 to 2000, many regions in the West grew well above national averages. Nelson (1997) also found that from 1990 to 1995, two-thirds of all non-metropolitan counties in the West grew at or above the national average. The population surrounding the Greater Yellowstone area (GYE), for example, increased 55% between 1970 and 1997, a rate greater than 72.8% of all counties in the U.S. The five fastest growing counties within the region, including Teton County, Wyoming, Teton County, Idaho, and Gallatin County, Montana, increased 107.2% overall; a figure placing them in the top 10th percentile of counties nationwide (Hansen et al. 2002).

The "New West" literature suggests that two factors have played a role in directing the migration patterns of newcomers to rural, Western communities: improved local services and high natural amenity appeal. The former factor is a result of decreasing transportation and communication costs, greater levels of unearned income

and wealth, and improved Internet and cable capabilities in many rural areas that have made it easier for "urban" employers and employees to relocate (Hansen et al. 2002). Booth (1999) looked at growth in the West and found the greatest population densities near regional metropolitan centers and amenities such as ski areas, national parks, and universities or colleges. He suggested that in-migrants seek out locations that provide them with natural amenities without losing expected cultural amenities or urban ties. Teton County, Wyoming, which contains the Grand Teton National Park gateway community of Jackson, adjacent Teton County, Idaho, which is the "bedroom community" for Jackson, and Gallatin County, Montana, which includes Montana State University and the high-tech center of Bozeman, are all examples of this new, high amenity, western community. They contrast strongly with other "less desirable" neighboring towns that lie further from the periphery of rapidly growing areas, are relatively distant from national parks or other natural amenities, and have economies that are still dominated by agriculture or mining (Hansen et al. 2002).

The second factor is the presence of natural amenities, such as scenery, wilderness, or wildlife, which make certain locations more appealing to potential residents. The Economic Research Service of the US Department of Agriculture has created a "natural amenities index" centered on three biophysical factors: climate, topography, and water area (McGranahan 1999). From 1970 to 1996, rural county population growth was highly correlated with these factors. A survey of new residents and businesses in a high amenity area revealed that, "scenery, environmental quality, pace of life, outdoor recreation, and climate were more important reasons for relocation than job opportunity or cost of living" (Rudzitis 1999). Von Reichert and Rudzitis

(1994) similarly found that younger migrants tend to move to amenity areas with higher wage employment opportunities but were still willing to accept a financial loss in order to live in a higher natural amenity area. This willingness to accept some costs in exchange for a high amenity lifestyle has led to other research suggesting that migration patterns are influenced as much by life-cycle needs as by economic opportunities (Clark and Hunter 1992).

The advent of population growth has brought about economic and land use shifts in many high amenity Western communities (Nelson 1997). White and Hannick (2004) found that non-metropolitan counties' relative amount of environmental amenities was correlated with positive economic growth, although location accessibility also played a role. Deller et al. (2001) found that rural areas with high natural amenities and quality of life predicted higher levels of economic growth. Rasker (2006) found that natural amenities on public lands, in addition to airport access, resident education, and employment opportunities, could stimulate adjacent county economic growth. Frentz et al. (2004) also found that most population growth occurred in counties with a high percentage of federal lands, although population growth varied with the type of land agency managing the public land. Kwang-Koo et al. (2005) examined the effects of natural amenities on economic growth and found that natural amenities varied in their ability to serve as growth engines; amenities were often only associated with one aspect of growth: the retail and service sector.

High amenity counties have typically sought economic benefits directly, in the form of tourism and recreation-based economic development, and indirectly, through the attraction of population and firms which might bring additional resources and jobs to the

community (Carruthers and Vias 2005). These strategies have characteristically led to an increase in service or high-tech industry in "New West" communities (Shumway and Otterstrom 2001, Smutny 2002, Sutton and Day 2004). Dahms and McComb (1999) looked at the effects of population change along the outer fringes of Toronto and suggested that while many small local businesses left the area, they were replaced by new amenity services such as construction, tourism, and finance. Ohman (1999) found that retail employment was correlated with recent population growth in the Northwest. Smutny (2002) documented increased growth in the service industry, recreation, and technology information in higher amenity towns in Idaho, although traditional economies still persisted in other areas. Hunter et al. (2005) similarly found an increase in local retail growth, while traditional sectors of employment still generated stable sources of income for long-time residents.

Land use conversion is also correlated with the economic and population changes occurring in amenity communities across the West. Jackson-Smith et al. (2005a) found that counties with the highest population growth also experienced the greatest land conversion. From 1982 to 1997, urban and built-up acreage increased 30%, the total land base developed 13%, and roughly half the land developed came from cropland (and another 40% from rangeland and 10% from forested lands). In general, new homes in rural areas took up more land and disproportionately led to conversion of farmland and forested land. Brown et al. (2005a) also found that settlement at lower exurban densities increased five to seven-fold in area from 1950 to 2000 across the United States, including non-metropolitan areas. This rise in lower density development, Carruthers and Vias (2005) argue, is more prevalent in "New West" counties, leading to greater land use

change and increased probability of sprawl. Diaz and Green (2001) suggest that land conversion will continue because growth protection measures, such as agricultural zoning, are only of limited effectiveness due to their susceptibility to local political influence. The growth machine theory, which emerged out of Molotch's (1976) seminal paper, supports this argument by suggesting that local politics are dominated by a pro-growth, land based elite, typically made up of large land owners, businesses that benefit indirectly from the economic returns of development, and local government officials, that attempt to maintain their status via increased community development and local capital investment (Humphrey 2001).

Emergence of Studies on Social Change and Attitudinal Differences

Given the degree of demographic, economic, landscape, and political change facing Western communities, social change is inevitable. One of the earliest efforts to understand the societal impacts of amenity-growth related change was grounded in social disorganization theory, which argues that sudden social changes, like a rapid population influx, can negatively impact community structure and the maintenance of societal functions, leading to a rise in destructive community outcomes like crime or alcoholism rates (Sampson and Groves 1989, Seydlitz et al. 1993). Freudenburg's (1982) study of Gillette, Wyoming, for example, documented how rapid population increases led to rising divorce or crime rates, decreases in local participation, and diminished community satisfaction. The relevance of social disorganization theory to community studies has been hotly debated, however, due to methodological differences, theoretical distinctions, and personal philosophies (Albrecht et al. 1982).

There is now growing evidence to support the presence of a short-term psychological or cultural disturbance in response to rapid population rise, followed by a period of community recovery and adjustment. Smith and others' (2001) longitudinal study of four communities in Utah experiencing boom-bust conditions found decreases in social integration, community trust, and increased concerns about crime after significant population increases, but the measures rebounded over time, suggesting limited long-term impact. Brown et al. (2005b) found that while population expansion in Delta, Utah led to less community satisfaction, residents were able to adjust to the changes and experience improved community satisfaction, particularly for residents with high place attachment. Greider and Krannich's (1985) study of the effect of community change on social stability found that social interaction did not uniformly decrease with rapid population growth; residents had a diversity of relationships they could form outside of the neighborhood. In studies of the boom-bust cycle for Vernal, Utah and Evanston, Wyoming, Krannich et al. (1986a,b) found that the two towns were relatively stable despite changing conditions with no strong evidence of long-term social disorganization or loss of community function.

More recently, research focus has shifted towards understanding differences in residents' attitudes and beliefs about tourism, economic development, and land use change. Andereck et al. (2005) looked at resident perceptions of local tourism impacts and found that while residents were able to perceive both benefits and costs of tourism, individuals who wanted tourism as part of the economy generally perceived more positive community impacts, regardless of their attachment to the community. Smith and Krannich (1998) looked at tourism towns in the West and found that residents living in

communities with higher levels of tourism development perceived greater negative social outcomes from tourism, while communities at mid-levels were generally ambivalent but worried about becoming overly dependent on tourism development. Thompson and Blevins (1983) also found that residents with previous development experience had the highest belief in economic benefits of energy development, but also the strongest concerns over social changes. For residents with no previous experience, uncertainty about potential changes was the greatest source of anxiety. Petrzelka et al. (2006) found that perception of the local economic condition was the strongest predictor of individual tourism attitudes.

These results complement previous studies of rural community resident attitudes towards potential high-risk project development, particularly the siting of hazardous waste. Bourke (1994), for example, found that community responses to a proposed waste site were strongly correlated to residents' anticipation of economic benefits and their perception of potential risks. In general, communities with lower economic satisfaction and limited development options were more likely to support development and accept greater risks. Spies et al. (1998) looked more closely at the differences between residents and communities leaders' attitudes toward such developments and found that local leaders were more supportive of hazardous waste facilities due to perceived economic benefits, while residents were more concerned about potential health risks. Residents, however, were more likely to believe that development would be beneficial to community, while leaders were more skeptical and concerned over the potential loss of control to exogenous corporations.

Resident attitudes towards land use change are generally more consistent and less contentious than other amenity-growth related topics. Gibson et al. (2005) found strong overall support in rural Australia for the role of farming and policy measures to preserve farmlands to limit amenity-growth related change, although residents differed in the types of values they ascribed to farmlands. Schlapfer and Hanley (2003) found that increasing scarcity of open space, in conjunction with high amenity landscapes, was correlated with stronger resident approval of public landscape protection programs. Kline (2006) has argued that socioeconomic trends such as population growth, rising incomes, and development should increase resident interest and support for preserving open space.

Furuseth (1987) also found broad support for preservation of local culture and values and opposition to sale of agriculture land, but Rosenberger and Loomis (1999) looked at the value of agricultural land as open space to visitors in high amenity towns and found that converting land to urban or resort use resulted in no net change in average consumer surplus because visitors were able to reap the benefits of improved cultural amenities while enjoying the aesthetic benefits from adjacent public land. Harvey and Works (2002) also discovered that adjacent protected land was not important for Portland, Oregon residents' migration decisions but did positively impact residents' perceived quality of life.

The Role of Residency Status in Attitude Studies

The shift towards studying attitudes and beliefs about land use change, tourism, and economic development emerged, at least in part, from both media and academic concerns that in-migrants to Western communities came from urban backgrounds and

therefore held an identity and associated values that differed from those of rural, long-term residents. These differences were expected to lead to "culture clash," a loss of community solidarity, and an increase in conflict over community goals, development pace, and resource allocation (Jobes 1995, Price and Clay 1980). In order to explore the realities of urban-rural attitudinal differences in amenity communities, researchers have typically used residency status to differentiate residents: urban newcomers versus rural, long-term residents.

Studies of newcomer and long-time resident attitudes towards amenity-growth related development provide mixed results, however. Some studies tend to support initial assumptions that urban newcomers were more pro-environmental, more politically active, and generally wanted to stop or slow development (e.g., Cockerham and Belvins 1977, Graber 1974, Theodori et al. 1998). Other studies, however, provide conflicting results (Jobes 1995, Sofranko and Williams 1980, Wellman and Marans 1983). Smith (1997), for example, found that newcomer residents did differ socio-demographically from long-term residents but that their attitudes about development and land use change either did not differ significantly from long-term residents or differed in ways other than expected. Both groups in Smith's study had a similar level of environmental concern, but in his case, locals were more interested in controlling growth than the expected newcomer group. Green et al. (1996) suggested that new, seasonal residents in upper Midwest states were less likely to support development and more likely to support land use planning, while Smith and Krannich (2000) found surprisingly few differences in resident attitudes towards issues such as the environment or population growth. Fortmann and Kusel (1990) found that urban newcomers did not express pro-environmental views but instead

tended to support locally prevalent views. Blahna (1990) also found no significant differences between new and long-term residents regarding population growth, resource management, or the environment, but his newcomers were more likely to support growth management practices, while long-term residents were more likely to support economic development. Hunter et al. (2002) looked at the impact of boomtowns within community subgroups and found that long-term residents were more integrated into the community and less worried about the changes than short-term migrants, in part because they had participated in social rebounds before and because they had stronger social ties and support networks.

The rise of seasonal homeownership in the U.S. and, in particular, the Rocky Mountain West has lately fueled similar residency studies of seasonal versus permanent homeowner attitudes towards amenity growth and development. According to 2000 U.S. Census Data, the national second home growth rate average is 3.1%. Five western states exceeded that average, including Wyoming at 5.5%, Montana at 5.9%, Idaho at 5.3%, Colorado at 4%, and Utah at 3.9%. In terms of percent change in growth, from 1990 to 2000, Utah had the highest Western state seasonal home growth rate, increasing more than 40%. Wyoming increased more than 30%, almost twice the U.S. average growth rate of 16.1% (Taylor and Lieseke 2002).

In general, results from seasonal versus permanent resident attitude studies echo those of newcomer and long-term resident studies. Based upon the same theoretical framework, seasonal residents are expected to be more urban, pro-environmental, and preservationist-oriented than their rural, permanent neighbors (Halseth 1998). Several researchers have refuted or moderated that assumption, however. Clendenning (2004)

found that seasonal and permanent residents in Wisconsin shared similar views towards attitudes in growth management, land use, and public land management. Connelly and Brown (2001) looked at attitudinal differences in an upstate New York community between seasonal residents, nonresidents (who own land but live elsewhere), and permanent residents and found that all of the residents supported water and land protection and strongly supported growth control and agriculture preservation, but year-round residents were more likely to agree that growth was too rapid while both seasonal and year-round residents were likely to disagree that land management was adequate. Marcouiller et al. (1996) found that permanent residents in Wisconsin were more supportive of economic development while seasonal residents were more likely to question benefits of growth and be in favor of growth control, as well as be more willing to limit public access. Permanent residents were also more likely to perceive tension and class differences with seasonal residents than vice-versa. Williams (2006) found that permanent residents in Western communities tended to have more support for economic development than seasonal residents, but neither group had significantly different attitudes about the landscape, community values, population growth, or access to public lands. Inman and McLeod (2002) did find that residency status was the strongest predictor of attitudes towards public management of agricultural land in Wyoming. Part-time residents, college graduates, smaller parcel landowners, and people who wanted a rural lifestyle were more likely to support public management of agricultural land. Long-term, full-time residents and those with economic benefits (large landowners or living in county for low taxes) were more likely to support private agriculture land management. However, no resident was single-minded in his or her land management goals and

preferences and lifestyle goals often clashed with economic values. Custer and Blahna (2000) found that residents in both permanent and seasonal communities expressed high levels of place attachment and community satisfaction. Stedman and Hammer (2006) and Brehm et al. (2006) both explicitly examined community attachment dynamics for seasonal versus permanent residents and found that while both groups had high levels of attachment, seasonal residents were more attached via natural amenities and escape dimensions of their community while permanent residents were more attached to social connections.

Socio-demographic Influences on Resident Attitudes

Research attempts to uncover the relationship between individual socio-demographic characteristics and environmental attitudes have also provided mixed results (Krannich and Albrecht 1995). Brehm and Eisenhauer (2006) and Hunter and Tooney (2005) both found a significant influence of Mormon Church membership on environmental attitudes. McBeth and Foster (1994) looked at attitudes of residents in five Idaho communities and found environmental concern to be widespread and cross-sectional, regardless of age, income, education, or "elite" status, and Vorkinn and Riese (2001) have argued that place attachment explains more variance in attitudes towards development than all other socio-demographic variables combined. Clendenning et al. (2005) looked at seasonal and permanent resident attitudes towards wildlife management on public lands in Wisconsin and found similar preservation attitudes. The authors argued that the general lack of difference in attitudes based on current residency status may be explained by past residency experience. Residents spending lots of time in the

area or returning to their childhood rural roots were more likely to possess rural attitudes and values. Attitudes may also be tied to resident views of the local context. Greider and Little (1988) state that residents may be less supportive of amenity-growth related development if it causes significant changes that shift the community away from traditional lifestyles and economic activities. Wulfhorst (2000) documented how one community in Utah embraced the building of a hazardous facility as a means of curbing other unwanted "New West" forms of development and growth.

The Link Between Attitudes and Behavior

The inherent assumption of attitude studies is that they underlie behavior and that a better understanding of individuals' attitudes can improve opportunities for education or behavioral intervention. According to the theory of planned behavior (TPB, Ajzen 1988), resident behavioral intention is the most proximal determinant of resident behavior, and behavioral intentions are themselves predicted by residents' attitudes toward the behavior, social norms for involvement, and perceived ease of behavioral implementation. Several studies (Deutscher 1966, Wicker 1969), however, have documented the weak relationship of attitudes to behavioral intentions. Armitage and Conner (2001) conducted a meta-analysis of almost 200 studies utilizing TPB and showed that intentions explained an average of 27% of the variance in behavior and that attitudes, subjective norms, and perceived behavioral control explained an average of 39% of the variance of intentions. This gap between intention and actual behavior has led Ajzen (2001) and others to suggest that behavioral intentions are important but complex in terms of how they translate to actual behavior (due to interactions with other

situational and psychological factors). Bell et al. (2005), for example, argued that the incongruence between attitudes and behavior for wind energy development represents an individual gap between positive attitudes in general and opposition in particular cases.

More current research has shifted focus from asking whether attitudes predict behavior to determining under what conditions the correlation between attitudes and behavior is strengthened. Several key findings have emerged from this work. Attitudes are more strongly correlated with behavior when they are based on direct experience with the attitude object (Fazio 1989), when behavior is measured using multiple indicators (Eagly and Chaiken 1993), when behaviors are voluntary (Ajzen 1991), when behaviors are measured at a similar level of specificity as the attitudes measured (Ajzen 1989), when the attitude is strongly held and accessible, and/or there is limited difficulty required in performing the behavior. Other important variables include the role of thought, particularly positive moods, in positively affecting behavioral intentions. Repetition, involvement, and response latency (accessibility of the attitude at time of needed behavior) are also positively related to behavior. Ajzen (1988) has argued that humans possess a need to maintain consistency between cognitive and affective components, and affective and conative[1] components, of attitude. Dissonance theory (Festinger 1957) suggests that inconsistency between either pair should lead to poorer predictions of behavior and, in the case of affective-conative consistency, will lead individuals to change their feelings to match their behavior, particularly if they have significant involvement and investment in current actions.

[1] Conation is defined as the connections of cognition and affect to behavior.

Studies exploring the relationship between environmental attitudes and behavior have tended to support the notion that the two variables are only weakly correlated. Dunlap (1991), for example, found that despite high levels of pro-environmental attitudes, people rarely take political or economic action to achieve environmental goals. Wright et al. (2003) looked at older adult attitudes and environmental actions in a "New West" community and found that while preservationist attitudes existed and higher levels of social concerns and environmental awareness were indicative of a greater willingness to take action, residents were generally not willing to get involved. Mohai (1985) also found that higher levels of environmental concern were not linked to political activism. McFarlane and Hunt (2006) looked at the relationship between individual attitudes about forest management and environmental activism and found that greater support for management actions actually led to a decrease in activism, while membership in environmental organizations and knowledge about the issue increased activism.

Tarrant and Green (1999) have suggested that attitudes rarely explain more than 30% of the variability in environmental behaviors and that researchers need to account for other external factors that play a significant moderating or mediating role between attitudes and action. One such external factor may be the extent of political disagreement over actions in a community. Mutz (2002) stated that political disagreement tends to stimulate attitudinal ambivalence and a desire to avoid conflict, leading to lower participatory levels. Nir (2005), however, felt that disagreement or cross-pressure helped people make up their minds faster and did not lead to ambivalence over local issues.

Other Predictors of Public Participation

While resident participation in community affairs is a complex phenomenon that has been explored from a variety of theoretical and philosophical fronts across multiple disciplines, participation has most consistently been explained via factors influencing individual civic and/or political engagement at national or aggregate levels of analysis. The dominance of this approach is, in large part, due to the assumption that civic engagement is a democratic ideal and that greater involvement by residents will improve the efficacy of a democratic society. Any activity that is anticipated to either directly or indirectly influence government action is defined as political participation (Verba et al. 1995). Historically, researchers have focused on direct actions such as voting, protest, or campaign contributions, although there is a shift towards understanding indirect action impacts (such as reading or talking about political news) in the recent literature.

Explanations of individual political participation generally focus on socio-demographic characteristics and an individual's material and civic resources, such as communication and organizational capacity (e.g., Rosenstone and Hansen 1993, Verba et al. 1995, Wolfinger and Rosenstone 1980). From a political perspective, one of the dominant assumptions has been that resources are not equal across residents, which affects their likelihood of being active in the political arena. Brady et al. (1995) proposed a resource model of political participation where time, money, and civic skills, all of which were more common in higher socioeconomic status (SES) residents, were strongly correlated to political action. The authors cautioned, however, that their general measure of action masked differences that lie within different kinds of political acts in terms of

resource requirements. Political interest, rather than resources, drove voting turnout, while income explained political contributions and political interest and resources defined the likelihood of participating in a campaign, but free time affected how much they were involved. Verba et al. (1995) have also suggested that "higher status" individuals have a greater stake in political outcomes, have greater personal resources to offset the costs of participation, and have greater levels of interaction with others who participate politically. Higher status individuals also tend to develop stronger civic attitudes, such as political efficacy or interest, which encourages greater levels of political participation. Similarly, Mohai (1985) found that increased personal efficacy, attitude strength, and resource availability among local "elites" were all linked to political activism.

A number of socio-demographic control variables such as age, race, and gender, in addition to education and income (as measures of SES), have been identified as correlates or predictors of political participation. In addition, several political orientation control variables, such as general political interest, political ideology and ideological extremity, sense of power over the actions of government (political efficacy), trust in others, media use, interpersonal discussion, and levels of political information have also been identified as significant predictors of political participation (e.g., Carmines 1991, Cohen et al. 2001, McLeod et al. 1996, McLeod et al. 1999, Nie et al. 1996, Scheufele & Eveland 2001, Scheufele et al. 2004, Schlozman et al. 1994, Ulbig & Funk 1999, Verba et al. 1995).

Schlozman et al. (1994) found that men tended to participate politically at slightly higher levels than women, although voluntary action outside of the political arena was similar in both genders, and women actually participated at greater levels in religious

institutions. The authors suggested that if women possessed the same level and control over financial and civic resources as men, they would be equally represented in political activities. Similarly, organizational involvement significantly increased female political participation. Schlozman et al. (1995) also found that, despite slight participatory level differences, men and women undertook similar types of participatory activities and had similar motivation reasons for involvement. Lowndes (2004) looked at social capital explanations for gender differences in civic engagement and found that, although there were no statistically significant differences, women were most active in lower, less formal aspects of politics and that the presence of young children contributed to greater interaction with neighbors and overall levels of involvement.

Nie et al. (1974) looked at the relationship between age and political activity and found that a hypothesized age decline in voting was not significant after accounting for education level differences. Binstock (2006), in fact, has argued that older residents vote at higher rates than other age groups, tend to be more knowledgeable about public affairs, use a wider array of news sources, contribute higher amounts to campaigns, have similar or higher leader contact levels than younger age categories, and more strongly identify with political parties. He cautions that age itself is not a reliable predictor of political attitudes, however. Jennings and Markus (1988) explored older resident involvement in political activities over a 17-year period and found that while more passive activities such as following political news remained steady or even increased, participation in more intensive forms of political activity decreased, although levels of public official contacting actually increased over time.

Religious affiliation, while often ignored in discussions of demographic correlates of participation, may also matter. Becker and Dhingra (2001) found that Christian church attendance and high religious salience both predicted the likelihood of volunteering, although social networks and volunteering opportunities were also important predictors. The type of denomination was not significant, however. Campbell (2004) argued that Protestant church participation often occurs at the cost of other forms of civic participation, or vice versa. Sherkat and Ellison (2007) looked at the relationship between religion and environmental activism and also found that Protestant church attendance was not correlated to political activism, although willingness to sacrifice and a belief in seriousness of the problem were significant predictors. Kanagy and Willits (1993), however, found that people who are frequent church attendees tend to behave in pro-environmental ways due to a stewardship ethic rooted in religious belief.

Information channels, including frequency of interpersonal political discussion and local news readership, are also critical predictors of participation (McLeod et al. 1999, Paek et al. 2005). Scheufele (2000) found that individuals who are involved in political conversations with their social networks are more likely to participate more frequently in other types of political actions. Ikeda and Richey (2005) also found a strong relationship between informal discussion, information sharing, and political action. Explanations for this relationship are mixed. The common assumption is that information broadens individuals' exposure and understanding of community affairs and politics, leading to a stronger cognitive base for participation (e.g., McClurg 2003). Eggins et al. (2007), in contrast, have argued that increased participation is not due to encounters with new information but actually due to the creation of a new self-identity as

a well informed "citizen representative" that reshapes one's view of issues and expectation to participate.

Political trust and efficacy also play a role in influencing political participation levels. The two variables are not unrelated; some studies have found political efficacy to be a significant, positive predictor of generalized trust (e.g., Marquart-Pyatt and Petrzelka 2006, Ulbig 2003). One of the challenges of studies using trust and efficacy, however, is uncertainty over causality; both variables have been utilized as both antecedents and outcomes of political and civic engagement (e.g., Ikeda et al. 2008, Norris 1999, Shah 1998). Ikeda et al. (2008), for example, provided a review of studies showing causality moving from efficacy to participation. Their study, however, demonstrated the opposite; political participation itself promoted cognitive feelings that participation made a difference. McCluskey et al. (2004) did find a relationship between efficacy and participation, although they argued that the relationship is complex; when actual efficacy failed to meet individuals' expectations, individual forms of political participation were more likely relative to collective efforts.

Another challenge, according to Levi and Stoker (2000), is that there are also two incompatible theories regarding trust in the literature. The first is based on theories of disaffection and alienation in which distrust should decrease the level of political involvement by individuals (e.g., Almond and Verba 1963, Finifter 1970). The second theory suggests that distrust can increase participation, particularly if individuals have higher levels of political efficacy (Gamson 1968, 1975). Similarly, trust can be measured as trust in political institutions or as interpersonal trust, leading to a confusing array of study results in the literature. Marquart-Pyatt and Petrzelka (2006) looked at the

relationship of governmental trust and efficacy on the likelihood of resident involvement in community issue-specific activities. The authors' found that residents living closer to the issue, involved in other forms of group participation, and expressing more skeptical views of the inclusiveness and effectiveness of decision-making processes were all more likely to get involved. Uslander and Brown (2005) looked at the impact of interpersonal trust on two forms of participation: civic and political. They found that forms of political participation were not correlated to trust but that trust was a critical predictor of civic actions. Boeckman and Tyler (2002) argued that civic engagement leads to political engagement with interpersonal trust as the mediating factor. This premise is also supported by Brehm and Rahn (1997) who asserted that there is a reciprocal relationship between resident involvement in community affairs, trust in others in society, and confidence in government leaders, although the effect of civic engagement on trust was much stronger than the reverse. Social trust was also positively correlated with governmental trust.

While the above variables are commonly utilized in participatory studies, Wakefield et al. (2006) have argued that additional social and contextual factors, such as an individual's social network, can also play a significant role in influencing both the likelihood and type of behavior taken. Abowitz (1990) also suggested that past efforts looking at micro-level political participation influences from social context were focused on social and economic status. Several related approaches have sought to address this concern by assessing the role of informal social interaction and social networks, social capital, and motivation to act on political action.

Social capital emphasizes the role of strong social ties and the community interaction as predictors of collective action and community capacity to response to change (Flora 1998). However, in practice, social capital is most commonly measured at an individual scale as membership in formal or informal non-political organizations. In general, organizational involvement has been shown to lead to higher levels of political involvement (e.g., Hays and Kogl 2007, Ikeda and Richey 2005).

Social interaction and one's social networks are argued to influence political action in several direct and indirect ways: recruitment, political awareness, interest, and providing additional resources to underleveraged individuals and groups. Interaction influences on political awareness and interest were previously discussed under the paragraph for informational channels. In terms of recruitment, Chwe (1999) suggested that individuals will participate if enough other people within their social network also participate; strong social linkages encourage participation. Klandersman (2002) similarly suggests that group identification by individuals fosters involvement. Brady et al. (1999) suggest that action recruiters seek out new participants who are likely to agree and take part, thereby over-targeting individuals that they have some leverage over. Social interaction can also supplement limited individual resources that may act as a barrier to participation (McClurg 2003). Docherty et al. (2001) suggested that social networks expose people to informal social stimuli that are distinct from personal development. Wakefield et al. (2007) also found that social networks were significant predictors of resident collective action in response to environmental health issues.

Wakefield et al. (2006) have also argued that individuals need both motivation and capacity in order to act. Motivation, according to Schlozman et al. (1995), can take

the form of either rational self-interest or a desire to achieve a greater community good. The "growth machine" model, which emerged out of Molotch's (1976) seminal paper, serves as one example of a self-interest driven model of action. Local politics are assumed to be dominated by a land based elite, such as large land owners, businesses, and/or local government officials, that can benefit from the economic returns of growth and therefore seek to promote increased community development and local capital investment (Humphrey 2001). Because this local "elite" also has the resources, both economic and civic, to participate politically, it meets Wakefield and others' (2006) requirement for motivation and capacity. Campbell's (2002) example of another self-interest driven topic, social security, however, suggests that motivation can trump resource requirements, since individual income levels were not correlated with political action on the issue.

Motivation based on the greater good has frequently been addressed via 'not-in-my-backyard' (NIMBY) movements. Freudenburg and Pastor (1992) suggest that NIMBY movements represent rational protests against proposed place-based changes based on resident experiences, knowledge, and attitudes towards the proposed change. Steelman and Carmin (1998) argued that, in a case study of local protest over a limestone mine development, residents who were involved felt that they were acting in the best interest of their community. Eser and Luloff (2003) looked at community response to a proposed limestone quarry and found that newcomers were highly motivated by issues of quality of life and health and safety concerns. In contrast, long-term residents failed to recognize the same motivations and, in fact, felt alienated by the newcomers' actions. Attempts by the newcomer group to mobilize and prevent the quarry ultimately failed

because they were unable to recruit long-term, local residents to their cause, even though they had more discretionary and civic resources.

Studies incorporating motivation as predictors in the civic or political participation literature often group motivations based on their purpose. Clark and Wilson's (1961) three-category explanation of motivations - material, solidary, and purposive - generally encapsulate findings from later studies. Material motivations included tangible, monetary rewards, while solidary motivations included intangible social rewards such as recognition and respect from others. Purposive motivations also reflected intangible social rewards but at higher levels, such as improving community well-being. In general, higher benefits and lower costs lead to greater participatory involvement in voluntary organizations. Butterfoss (1993), for example, found that higher benefits predicted more participatory roles. Friedmann et al. (1988) found that leaders and residents viewed helping others as a more significant motivation than personal gain, although Kaplan (1986) found that participation was related to tangible benefits. Knoke (1988) found that higher levels of benefits overall were related to greater participation as well as to donating time and money, but normative benefits had the strongest impact. Fowler and Kam (2007) looked at differences between concern for others versus concern for others in certain groups as predictors of political participation. They found that both measures had a strong, significant relationship with participation and that involvement went beyond the notion of self-interest or a moral obligation to participate.

Place attachment can also been seen as a type of motivation for action. Chavis et al. (1986) suggested that participation is a natural manifestation of sense of community;

people who are more attached are expected to get more involved in their community due to a greater sense of obligation, an increased belief in their political efficacy, greater concerns over outcomes due to a belief that their views or needs are shared by others, and greater motivation to take action on others' behalf based on their emotional connection to others. Hays and Kogl (2007) suggested that individuals with higher levels of community identification and attachment had higher levels of organizational involvement due to a reciprocal relationship in which membership increased connectedness and connectedness increased membership. Davidson and Cotter (1989) found a significant relationship between sense of community and campaigning, voting, talking about issues, working with others to solve issue, and contacting leaders about issues. Higher-attachment individuals also participated at higher levels regardless of whether the issue was local, nonlocal, or national in focus and were more likely to take actions that involve significant amount of commitment. Ryan et al. (2005) found that local social ties from either residency status or socioeconomic status improved individual attachment, which in turn improved participation. Payton et al. (2005) also found that individual place attachment and trust influenced civic action levels (in terms of donating time, money, or resources to an issue).

Amenity-Growth and Residency Status-Related Participation

Efforts to find research examining residency status or amenity-growth related impacts on political or civic participation yielded limited results. Distance, serving as a proxy for residency status, may play a role. Dyck and Gimpel (2005) found that as distance increased from voting precincts, voting levels decreased. Furthermore, distance

impacts occurred within a limited range; the greatest decrease occurred 10 miles away from precinct locations. Marquart-Pyatt and Petrzelka (2006) also found that residents living closest to a proposed rezoning site were more likely to get involved in forms of civic engagement than residents living farther away from the site.

Out-migration Behavior as an Alternative Action

Aside from participating in political or civic actions to address amenity-growth related changes, residents can also act by moving from an unacceptable place. Out-migration is a recurring theme in the Rocky Mountain West, historically connected to global or localized economic shifts. Krannich and Luloff (1991) noted an out-migration of rural areas in response to modernization and industrialization in the 1960's, a 1970's population resurgence in rural areas and industrial expansion, and a shift back to economic decline and population loss in the 1980's. Humphrey (1993) has argued that resource dependent communities have traditionally been geographically isolated and overly dependent on extra-local support. As resource communities evolve, they proceed towards increasing specialization and economic susceptibility; if the market declines, resource dependent communities are hit strongly with plant closings and human and capital flight by those with the resources to do so. Nord (1994) stated that in areas of limited economic opportunities, an over-representation of low income positions attracts and holds the unemployed poor to entry level jobs; these residents are then unable or unwilling to move when economic conditions change. The volatility of resource dependent communities from repetitive hiring/firing cycles can also provide behavioral reinforcement to keep skilled workers in the area (Freudenburg and Gramling 1994).

Amenity-growth related out-migration may not be driven solely by economic demands, however. For many new residents in "New West" communities, the primary motivations to move into the area include lifestyle change, enhanced quality of life, location-specific amenities, and improved residential satisfaction (Barcus 2004, Clark and Hunter 1992, Knapp and Graves 1989, Von Reichert 2001, Williams and Jobes 1990). Beyers and Nelson (2000) looked at non-metropolitan growth in the 1990's and found that the process of in-migration was not tied to economic well-being, although this may not contradict the idea that out-migration is mostly economic in character. Documented cases of out-migration in "New West" communities suggest that, rather than losing the rich and keeping the poor (as found in previous resource dependent community studies), amenity-growth related communities are experiencing an opposite trend: displacement of lower wage residents from high amenity towns due to increasing land values and housing costs in a limited job market. Gober et al. (1993), for example, documented how rising housing costs and low wage jobs in Sedona, Arizona have forced many residents to move out to suburban neighborhoods in order to sustain a livelihood. Certainly for these lower income residents, the data suggest that economic factors are driving out-migration patterns. For residents with significant financial resources, however, loss of non-economic characteristics through increasing development and land use change may be a stronger predictor of movement into or out of the community.

Life-cycle needs represent a third potential influence on resident migration patterns, beyond economic or lifestyle opportunities (Clark and Hunter 1992). Changing preferences based on education, career, housing, income, or retirement needs can drive residents into or out of a community. Nelson and Sewell (2003), for example, found that

non-metropolitan growth could not be solely explained by labor and housing markets; the attractiveness of non-metropolitan areas increased with age, while younger resident migration decisions were influenced by labor and housing markets. Von Reichert and Rudzitis (1994) similarly found that younger migrants tend to move to amenity areas with higher wage employment opportunities.

Research Hypotheses

Based on the literature review, it is clear that individuals have a wide range of responses to "New West" growth and land use change. Despite limited support for differences in attitudes between newcomers, seasonal, and long-term residents, Clendenning et al. (2005) argued that residency status remains a significant consideration when assessing resident attitudes towards amenity-growth related change. Seasonal residents have a significant impact on the communities they inhabit, influencing its social structure and economy, challenging existing views, and serving as important stakeholders necessary for collaborative approaches (Mottiar and Quinn 2003). Due to their lack of ability to effectively participate in community decision processes, however, their attitudes are often largely ignored by and/or unknown to those who set community development agendas. By generating additional residency-based findings, this research provides additional knowledge regarding seasonal residents and augments the existing literature on attitudinal-behavioral linkages.

This study also provides several, newer contributions to the study of amenity-growth related growth and seasonal homeownership in the Rocky Mountain West by exploring resident behavioral responses to changes in their community. By examining

factors influencing resident intention to participate in amenity-growth related activities, this study identifies potential community subgroups with the motivation and capacity, or lack thereof, to participate and identifies which issues are relevant for which audiences. Providing a discussion of ways to improve or build participatory processes into rural communities may give community leaders options for how to address participatory disparities among residents, if they so desire. Finally, this study briefly investigates out-migration as an alternative behavior for residents dissatisfied with their community.

In order to evaluate these research goals, this research study sets forth the following research hypotheses:

1. Residency status-based differences in land use change attitudes will depend on the type of change that has occurred. There will be no significant differences in attitudes towards agricultural land use change based on residence status. However, there will be differences in attitudes towards increasing seasonal and permanent residential development based on residential status. Based on mixed results from the literature, seasonal residents should share growth control views while permanent residents should express more pro-growth attitudes. These relationships, however, are expected to be influenced by length of residence, childhood roots, religious orientation, and other socioeconomic characteristics.
2. There will be differences in resident attitudes towards opportunities for economic development, but not population growth, based on residential status. Permanent residents are expected to have greater support for tourism-based economic development opportunities than seasonal residents. These relationships, however,

are expected to be influenced by length of residence, childhood roots, religious orientation, and other socioeconomic characteristics.

3. Community change attitudes will be more strongly predicted by aspects of place attachment, community satisfaction, resident values for property ownership, and development activity than by socio-demographic or residency status variables.
4. Community change attitudes will not be correlated to resident intention for involvement in community affairs, when controlling for all other variables.
5. Residents will vary in their inclination for participation in local community affairs based on socio-demographic, place attachment, motivation, civic and socio-economic resources, political orientation, and social network characteristics. Residents with higher levels of income, civic skills, motivation, place attachment, political efficaciousness, local social connections, younger age, and lower levels of trust are expected to have higher predicted participation rates, regardless of residency status.
6. Residents will vary in their predicted level of participation in different types of community-based actions based on socio-demographic, motivation, resources, place attachment, political orientation, and social network characteristics. Residents with higher levels of socio-economic resources are expected to participate more frequently in money-intensive activities, while older residents are expected to participate more frequently in less intensive, social-based actions compared to other demographic groups. Residents with higher levels of "altruistic" motivation, stronger social connections, political efficaciousness, as well as lower levels of political trust, are expected to participate more frequently

in more time-intensive actions. Women are expected to participate at slightly lower rates then men.

7. Residents will vary in their predicted level of participation for specific local issues based on socio-demographic, motivation, resources, political orientation, place attachment, and social network characteristics. Residents are expected to respond most strongly to issues that are most relevant to their unique needs and interests.
8. Predictors of resident intention for involvement in community affairs will be strongly correlated to predictors of resident self-reported political activity, when controlling for all other variables.
9. Residents are expected to be more likely to out-migrate from their community due to a reduction in quality of life relative to a change in economic condition. Since many new residents are independent of the local economy, economic downturns are not expected to cause these residents to out-migrate from their community. Low-wage residents, however, may be pushed out of the community by rising land values and housing costs.

CHAPTER 3

METHODOLOGY

This study uses a multi-method research design that incorporates qualitative and quantitative methods, each with different strengths and weaknesses, to explore aspects of individual attitudes and behavioral intention in response to amenity-growth related change. Multi-method research designs provide several advantages for social science researchers addressing complex research questions: they provide greater inference strength and data triangulation, and they allow for a greater diversity of views on the topic of interest (Tashakkori and Teddlie 2003).

Three different methods of data collection and interpretation are used in this study: secondary data analysis, key informant and phone interviews, and a mail survey. Secondary data analysis, key informant, and phone interviews formed the first phase of research, providing initial exploratory evidence for or against research hypotheses. The mail survey allowed for confirmation of initial findings and for further in-depth exploration of research questions and hypotheses.

Study Areas

An initial list of study communities was developed based on three criteria. Communities were identified that: 1) shared similar cultural, economic, and religious ties; and 2) were experiencing significant seasonal population growth; but 3) were at different stages of amenity-growth related development. Based on these initial criteria, six communities were initially selected as plausible study sites: Garden City, Laketown, and

St. Charles in the Bear Lake Valley (including Rich County, UT and Bear Lake County, ID) and Afton, Alpine, and Star Valley Ranch in Star Valley (Lincoln County, WY).

The six communities share some similarities and dissimilarities in terms of natural amenity-related development. Shumway and Otterstrom's (2001) classification of Western rural counties listed the two counties contained within the Bear Lake Valley as "diversified," based on the increasing role of recreation activities as a foundation for local economic growth, in conjunction with a high level of natural amenities and continued presence of agricultural operations. Lincoln County, Wyoming was listed as "New West" based on higher levels of natural amenities and a dominant service industry in Star Valley. The U.S. Department of Agriculture's Economic Research Service's (ERS) 2005 community typology labeled Bear Lake County as a recreation destination, while Lincoln County was labeled a retirement destination and Rich County was labeled as both a recreation and retirement destination. Recreation communities were identified based on, "the share of employment or share of earnings in recreation-related industries in 1999, share of seasonal or occasional use housing units in 2000, and per capita receipts from motels and hotels in 1997," while retirement communities were identified based on 15 percent or greater growth of residents 60 and older between 1990 and 2000 due to in-migration.

The six communities also share some similarities and dissimilarities in terms of second home growth. As of the 2000 U.S. Census, Garden City had the highest percentage (60%) of second homes relative to total housing units, followed by Star Valley Ranch at 55%, St. Charles (40%), Laketown (21%), Alpine (16%), and Afton

(5%). Based on these data, communities can be potentially classified by the extent of second home development (Table 1).

Bear Lake Valley

The Bear Lake Valley covers roughly 2,000 square miles (of which 136 sq. miles is water) across the northeast corner of Utah and southwest corner of Idaho. The valley includes seven towns: Laketown, Garden City, St. Charles, Georgetown, Bloomington, Paris, and Montpelier, as well as the unincorporated communities of Bern, Liberty, Ovid, and Fish Haven. The region was a popular fur trapping destination as early as 1811, and trapping was the dominant activity in the region until 1862, with the passage of the Homestead Act. The following year Brigham Young sent Charles C. Rich to lead an exploring party into the Bear Lake Valley as a potential settlement site; the valley was progressively settled over a 20-year period beginning in 1863 (Utah History Encyclopedia 2003). The Bear Lake region is sparsely populated; the 2006 population estimate for both counties was 8,207, with a population density of 1.9 people/square mile in Rich County and 6.6 people/square mile in Bear Lake County (U.S. Census Bureau 2000). Harsh winters have strongly affected land use patterns in the valley; low

Table 1. Distribution of selected communities with regards to extent and type of second home growth.

	Seasonal Growth	**Mixed Seasonal and New Permanent Growth**
Limited Growth	Laketown	Afton
Moderate Growth	St. Charles	Alpine
Strong Growth	Garden City	Star Valley Ranch

precipitation and extreme temperatures have historically led much of the valley's land being used primarily for grazing livestock.

Star Valley

Star Valley, Wyoming is approximately 14 miles wide and 50 miles long, located in the mountains on the western edge of Wyoming, adjacent to Idaho. The valley forms the intersection of three major Wyoming rivers, the Salt River, the Greys River, and the Snake River and includes four towns: Alpine, Afton, Thayne, and Star Valley Ranch, as well as the nine unincorporated communities of Etna, Freedom, Grover, Smoot, Fairview, Osmond, Auburn, Bedford, and Turnerville.

Star Valley was originally inhabited by Shoshone Indians. As part of the exploration previously discussed for Bear Lake Valley, the region's first white explorers arrived in approximately 1812, during West Coast exploration efforts and trapping activities. Permanent settlement in Star Valley, Wyoming began in the late 1870's when Mormon apostles Moses Thatcher and Brigham Young, Jr. chose Star Valley for colonization. Agriculture, in particular dairy operations, was the dominant land use throughout the early part of the 20th century, leading to the valley's nickname of "Little Switzerland." Over time, the creameries have given way to other economic and residential development; the Star Valley Cheese Factory in Thayne is the last creamery to remain in business in the valley. The valley is still sparsely settled, however, at roughly 3.6 people per square mile.

Economic Indicators

Table 2 provides a breakdown of select economic indictors for Bear Lake and Star Valley. Roughly 60% of Bear Lake and Star Valley's community population age 16 or older was working as of the 2000 Census. The majority of those employed commute to work; on average, nearly one in four workers cross a county or state line to commute to work every day. The dominant specified occupation in 2000 was management, followed by sales, service, and construction, while natural resource-based extractive occupations

Table 2. Select economic indicators for Bear Lake and Star Valley.

2000 Census	**Bear Lake Valley[2]**	**Star Valley**
Total employed population	1,757	6,770
Commute to work (pct.)	93.2	94.4
Average travel time (min.)	25.2	25.1
Live and work in same county (pct.)	69.7	79.0
2004 Median household income	$40,664	$48,470
2004 Families below poverty line (pct.)	9.9	8.3
Class of worker (pct.)		
Private wage	66.4	70.6
Government	19.3	17.6
Self-employed	12.6	10.9
Occupation (pct.)		
Management, professional	32.4	26.8
Service	15.7	14.2
Sales and office	19.8	21.8
Natural resources	4.7	1.7
Construction	13.8	20.8
Industry (pct.)		
Agriculture, forestry, and fisheries	20.2	12.4
Construction, manufacturing, transportation	7.7	13.1
Health, education, professional services	19.6	18.6
Recreation, arts, accommodation and food services	7.7	8.1
Retail	12.6	11.6

[2] Based on an average of Bear Lake County and Rich County data.

accounted for 2% to 5% of occupations valley-wide. Private employment and government have consistently provided the majority of jobs in both regions; significant local industry includes the retail trade, health care services, education, construction, agriculture, and accommodation and food services. Median annual household income in 2004 for Bear Lake was $40,664, with approximately 10% of households falling below the poverty line. The median annual household income in 2004 for Star Valley was $48,470, with 8% of households falling below the poverty line.

Social Indicators

Table 3 provides select data on social indicators in Bear Lake and Star Valley. Bear Lake Valley's average population experienced a slight 2% decrease from 2000 to 2006[3] while Star Valley's population grew an estimated 14.3 percent during the same period of time. Both valleys' gender distribution are evenly split, predominately Caucasian, and the majority of residents possess a high school diploma and/or some college experience. Most households are married with an average of three children. The median age of residents in Bear Lake is 35 years while the median age of residents for Star Valley is 37 years. Roughly two-thirds of residents have lived in the same house since 1995. Housing development was relatively stagnant up to 2000 in Bear Lake and Star Valley; over 70% of housing in the county was built prior to 1990. There were, however, 126 building permits issued in Rich County for 2006, up 85% from 2004 and 62% from 2005. Only 65 crimes, mainly larceny theft and burglary, were reported in

[3] Rich County's population has risen slowly at a rate of 4% growth from 2000 to 2006. Bear Lake County's overall population has decreased at approximately the same rate, although communities at the south end of the county (near Garden City and Fish Haven) experienced an estimated 5% increase in population from 2000 to 2005.

Table 3. Select social indicators for Bear Lake and Star Valley.

Census Data	**Bear Lake Valley**[4]		**Star Valley**	
	2000	2006	2000	2006
Total population	4,186	4,104	14,573	16,383
Gender ratio: males to females	50:50	--	51:49	--
Median age	35	--	36.8	--
Ethnic distribution				
Caucasian (pct.)	98	96	98.8	94.8
Percentage of households				
With children under 18	42	--	38.7	--
With adults over 65	29	--	23.2	--
Married	71	--	66.7	--
Average family size (persons)	3	--	3.2	--
Total housing units	2,838	3,283	6,831	8,030
Residence (pct.)				
Same residence in 1995	64	--	59.1	--
Residents born in-state	62	--	44.3	--
Year structure built (pct.)				
1990 to 2000	21	--	23.8	--
1970 to 1989	35	--	42.1	--
1960 to 1969	8	--	7.9	--
Before 1960	36	--	26.2	--
Median home value	78,450	--	$95,300	--
Education (pct.)				
HS Diploma and/or some college	89	--	87.9	---
Bachelors Degree	17	--	17.2	---

2005 for Rich County and 18 in 2004 for Bear Lake County, while 111 crimes, mainly larceny theft and burglary, were reported in 2005 for Star Valley (U.S. Census 2000).

Migration Patterns

According to U.S. Census Bureau's (2006) Population Estimate Program, which tracks domestic migration of household populations under the age of 65 using IRS federal tax returns, 6.4% of Bear Lake's 2006 taxpayers moved into the county from the previous year, while 8.1% of the county's 2005 residents moved out of the county in 2006. Of

[4] Based on average of Rich County and Bear Lake County data.

those leaving the county, 2.6% moved within state while the other 5.5% moved out of state. For Rich County, 9.3% of their 2006 moved into the county from the previous year, while 12.1% of 2005 taxpayers moved out of the county. The majority of those (7.9%) moved to other Utah counties, in particular Salt Lake and Cache Counties. For Star Valley, 10.9% of 2006 taxpayers lived in another county in 2005. Only 3.7% moved in from within state while 7.2% moved in from out of state. Common places to relocate from included Teton, Uinta, Sweetwater, Sublette, and Natrona counties in Wyoming and Cache and Salt Lake counties in Utah. 9.2% of 2005 taxpayers moved out of the county in 2006; the majority (6.4%) moved out of state to locations such as Salt Lake County, Utah, or Madison County, Idaho.

Intra-site Variability among Communities

Although communities within Bear Lake and Star Valley are grouped together for analysis purposes, intra-community variability exists, in terms of community socioeconomic characteristics and growth management planning efforts. In order to highlight community similarities and dissimilarities, a brief discussion of each of the six communities is provided below.

Garden City, UT

Garden City is the primary site of tourism-related growth in Bear Lake. According to the U.S. Census, Garden City's total permanent population was 318 in 2000. Residents' median age was 40 years, with an average household size of 2.9 people. Roughly one-third of households had a family member age 65 or greater, and approximately one-half of residents have lived in the same house (or in the same city or

county) since 1995. The median household income was $40,750. Agriculture and mining makes up 4% of the total industry, while construction, education, health, social services, retail, and recreation accounted for 61% of total jobs. One-third of all housing units in Rich County are located in Garden City. Larger unit structures make up 17% of housing in the community, while high seasonal use is reflected in a 14.9% occupancy rate. Increasing amenity based tourism has also raised home values above the median county level; housing prices ranged up to a half a million dollars.

Garden City's growth management plans are in line with Rich County goals and objectives. The town has a planning and zoning board and also works with the Bear Lake Regional Commission and the Bear River Association of Governments for planning purposes. Land use ordinances have been established for the town, including a recent dark sky ordinance, along with architectural/aesthetic standards for buildings. Garden City developed a general plan in 2008 which set forth development policies and goals for the town, including continuing to permit controlled residential growth, promoting mixed density, affordable housing, modifying the town zoning ordinance to encourage single-family residences, and encouraging housing clusters to maintain open space and Bear Lake views.

Laketown, UT

Laketown is located on the south end of Bear Lake. According to the U.S. Census, the town's total permanent population was 199 in 2000. Residents' median age was 43 years, with an average household size of 3.1 people. Roughly one-fifth of households had a family member age 65 or greater while almost all residents have lived

in the same house (or in the same city or county) since 1995. The median household income was $60,893. Agriculture makes up 17% of the total industry, while construction and education, health, and social services account for approximately 50% of total jobs. Laketown's growth management plans are in line with Rich County goals and Garden City planning and zoning board decisions. Garden City's 2008 General Plan was inclusive of Laketown.

St. Charles, ID

St. Charles is located on the north end of Bear Lake. According to the U.S. Census, the town's total permanent population was 137 in 2000. Residents' median age was 56 years, with an average household size of 2.3 people. More than half of households had a family member age 65 or greater while three-quarters of residents have lived in the same house (or in the same city or county) since 1995. The median household income was $21,923. Agriculture makes up only 3% of the total industry, while construction, education, health, and social services, retail, and recreation account for 81% of total jobs. St. Charles's growth management plans are in line with Bear Lake County's goals and policies; land use, subdivision, and large-scale planned development ordinances are established for the region. While current development activity is minimal, the Bear Lake County Comprehensive Plan 2025 projects population growth and economic development in future land use plans for the town.

Alpine, WY

According to the U.S. Census, Alpine's total permanent population was 529 in 2000. Residents' median age was 34 years, with an average household size of 2.6 people.

Roughly one-fifth of households had a family member age 65 or greater, and approximately one-half of residents have lived in the same house (or in the same city or county) since 1995. The median household income was $45,313. Agriculture and mining only makes up 5% of the total industry, while construction, retail, and recreation account for 60% of total jobs. The median home value is $138,500, but ranges up to a half a million dollars.

Alpine's growth management plans are in line with Lincoln County comprehensive plans. The town has a land use and development code, revised in June of 2008, which includes zoning and building approval, and a town master plan that provides land use management and planning recommendations. The master plan includes the following community development objectives: adopting subdivision regulations to manage future land uses, updating zoning ordinances to encourage affordable, mixed residential and commercial housing, annexing some lands north of Alpine into the town, improving the attractiveness of highway development areas, and preparing a recreation master plan.

Star Valley Ranch, WY

Star Valley Ranch incorporated in 2005. According to the U.S. Census, Star Valley Ranch's total permanent population was 1,465 in 2006. Residents' median age was 61 years, with an average household size of 2.2 people. Slightly less than half of households had a family member age 65 or greater and approximately one-half of residents have lived in the same house (or in the same city or county) since 1995. The median household income was $47,981. Agriculture and mining makes up only 6% of

the total industry, while construction, retail, education, health, and social services, and "other" services account for 64% of total jobs and revenue. The median home value is $157,300, but ranges up to a half a million dollars.

Star Valley Ranch's growth management plans are in line with Lincoln County comprehensive plans. The town has a planning and zoning board, a master plan, and land use ordinances to regulate development activity. The master plan currently projects a moderate rate of residential development in the town, with 88 percent of existing undeveloped residential property eventually being developed. Additionally, three subdivisions have been planned for land adjacent to Star Valley Ranch. No commercial development is expected; existing covenants require that town private property be used only for the development and use of a single family housing unit and some accessory buildings.

Afton, WY

According to the U.S. Census, Afton's total permanent population was 1,815 in 2000. Residents' median age was 34 years, with an average household size of 2.8 people. Roughly one-fourth of households had a family member age 65 or greater, and approximately three-fourths of residents have lived in the same house (or in the same city or county) since 1995. The median household income was $37,292. Agriculture and mining makes up 6% of the total industry, while construction, manufacturing, transportation, education, health, and social services, retail, and recreation account for 69% of total jobs. Larger unit structures make up 5% of housing in the community. The median home value is $97,000, but ranges up to $300,000. Afton's growth management

plans are in line with Lincoln County comprehensive plans. The town also has a municipal master plan (currently under revision) to guide development decisions.

Data Collection

Data collection involved a combination of secondary data from the U.S. Census, phone and in-person qualitative interviews, and a mailed survey. The U.S. Census provided baseline data, including demographics, housing, and economic conditions of the selected communities. Interviews and survey data were used to address research questions regarding resident attitudes towards community changes and how those attitudes related to their likelihood of involvement in community affairs.

Interviews

During the fall and spring of 2006 and 2007, in-person and phone interviews were carried out for a total of 58 residents in Star Valley and Bear Lake Valley. Interviews were designed to build upon initial secondary data results by exploring differential resident attitudes and predicted behavior towards amenity-related change. In-person interviews were used for permanent residents and local leaders in the selected study areas, while phone interviews were used to contact seasonal homeowners at their permanent addresses.

The use of both in-person and phone interviews yielded different strengths and weaknesses for interview results. In-person interviews provide two key benefits to researchers: information quality and response rate. Face-to-face interviewing generally increases response rate, since the psychology of personal interactions tends to create a

feeling of duty and/or obligation among interviewees to agree to, and remain with, the interviewer throughout the entire process. Since participants can ask for question clarification and interviewers can probe for response and/or add questions as needed to elicit the required information, in-person interviews tend to minimize respondent answers of "no" or "no response." In-person interviewing also allows researchers to observe information that may be too personal to ask, such as ethnicity, gender, or general reactions to questions, and to use those observations in analysis (Bickman and Rog 1998). In contrast, phone interviews allow for greater access to difficult-to-reach populations (such as seasonal homeowners), and are relatively efficient in terms of time and money expended. Information quality and response rate can suffer, however, since phone interviewees are restricted to participants with published, available phone numbers and by respondent willingness to stay on the phone; phone interviews generally lasted 10 minutes or less, compared to 30 minutes to 1 hour for in-person interviews.

Interview Sampling

Interviews were conducted using both key informant and random sampling methodologies. Key informants were defined as local residents who were informed about community affairs and representative of different subgroups and social status levels. Key informants were identified using the purposive sampling strategy of snowball sampling. Purposive sampling is a method of selecting participants of diverse backgrounds, attitudes, and experiences in order to represent the range of research needs found both within and across communities. It is an appropriate method when developing a comprehensive understanding of the issue at-hand is more important than

generalizability (Babbie 1989). An original list of participants was created based on personal knowledge of key leaders and from local resident expertise. From this initial sample, participants were asked to identify other residents to interview who were knowledgeable about community change, via snowball sampling. Snowball sampling does not establish a limit to the number of residents to interview; data richness is more important than quantity. For this study, snowball sampling continued until the information received was redundant (Babbie 1989).

Because seasonal residents were not present to interview in person, a sampling frame was developed using community property tax information; all individuals with permanent mailing addresses outside Rich, Bear Lake, and Lincoln County were treated as seasonal residents. A random sample of seasonal property tax owners was selected from the sampling frame and contacted by phone to participate in a phone interview. To encourage greater gender and age diversity, selected respondents were randomly called from noon to 2 p.m. or from 6 to 8 p.m. Mountain time on a Tuesday, Wednesday, or Sunday.

Interview Procedures

Requests for interviews were made either in-person or over the phone. Given the perceived sensitive nature of the topic by respondents, no interviews were audio-taped; extensive field notes were taken and transcribed after the session ended. An assumption that the topic would be sensitive to interviewees was not made initially; interviews were intended to be audio-taped. However, given that the majority of key informants were in highly visible government or other local leadership positions, many were reluctant to

participate in a taped session for fears that the information might be released to the public. Additionally, equipment to audio-tape telephone conversations was not available for seasonal interviewees. Informed consent was verbally obtained prior to the interview process. An informed consent statement that included contact information for researchers and the IRB was also provided to participants after the interview process (Appendix A).

Interviews followed a series of general, open-ended research questions about community change, second home development, and resident participation (Appendix B). Two sets of questions were developed: one for in-person interviews and one for phone interviews. The structure of both interview protocols did allow for some deviation to encourage interviewees to share information in their own way and to allow for new material to be discovered (Mohatt et al. 2004).

Response rates by study site and residency status are provided below (Table 4). Given the small sample size, caution is warranted in treating the interview results as representative of the larger subpopulations' views, although they do provide some initial

Table 4. Response rates for qualitative interviews.

	Bear Lake Valley		**Star Valley**	
	Number of Respondents	% of Total Contacted	Number of Respondents	% of Total Contacted
Permanent Residents	23	100	8	89
Seasonal Residents	14	100	13	93
Overall N	37	100	21	91

assessment of whether attitudes differ by residency status and allow for triangulation of quantitative findings.

Mail Survey

A mail survey was used to explore research questions and hypotheses in more detail and build upon initial qualitative findings. Economical to produce in mass quantities, mail surveys provide an efficient, cost-effective method that generates reasonable returns in information and response rate. Consequently, survey data are probably the most common form of empirical data gathered with regards to sociological studies. The nature of survey data allows for simultaneous analysis of different study sites and the ability to use random sampling allows for result generalizability to other, non-studied sites (Gorard 2003). The downside to using a survey is that the results are only as good as the questions asked; because surveys tend to be standardized, they are difficult to change once a study has begun. Perhaps more significant, surveys are vulnerable to measurement error. Poor wording choices or sensitive questions may bias respondent answers. The other crucial limitation of survey data involves its inability to provide cause and effect relationships between studied variables. While researchers can suggest correlations, they cannot prove their models are correct (Gorard 2003).

Mail Survey Sampling Strategy and Procedure

Quantitative data were collected in the two study areas during the summer months of 2007. In each study area, a comprehensive sampling frame was developed by compiling current county property tax records. Because each county's tax record format

differed, effort was taken to standardize the format and remove duplicate addresses when consolidating data. The sampling frame was then filtered to exclude property owners outside of the communities of interest, leading to a population of 4,282 property owners in Bear Lake Valley and 3,792 property owners in Star Valley. From the sampling frame, a stratified random sample of 1,500 property owners was selected: 750 for each study site, distributed 50:50 for permanent versus seasonal homeowner status. Seasonal homeowner status was identified using previously described methods of assigning seasonal homeownership status to property owners with permanent mailing addresses in a different county than the location of their property. Sample size was calculated *a priori* assuming an alpha level of 0.05, an R-squared effect size of 0.05, and 90% power, yielding an N of 450. Assuming a 30% response rate and some data loss due to duplicate or incorrect addresses, the final sample size of 1,500 was determined for mailing purposes.

A standardized, self-administered questionnaire was mailed to each of the randomly selected households, using the Tailored Design Method by Dillman (2000), which is intended to improve survey quality by improving response rate. The Tailored Design method entails a pre-survey notification letter, an initial survey with a cover letter, a reminder/thank you post card, and a second questionnaire with a reminder letter for non-respondents. A cover letter was integrated into the first page of each survey that discussed the importance of the project, specified that participation was voluntary, and promised that individual responses would remain confidential. Additionally, a telephone number was provided that individuals could call to ask questions about the survey.

Within each randomly selected household, the survey asked participants to choose the household member 18 years of age or older with the most recent birthday to fill out the survey. This step is intended to randomize the selection of household members by age and gender (Wulfhorst and Krannich 1999). However, for Bear Lake County respondents,' gender was skewed heavily in favor of males over females. This skewness suggests that efforts at randomization may have been undermined by the use of a sampling frame that was based on property tax information in predominately male names.

Respondents were provided with an initial screening question to verify questionnaire relevance. Respondents owning residential property in either study site were asked to complete the survey. Respondents never owning residential property at either site were asked to return the blank questionnaire in the envelope provided. Respondents no longer owning residential property at either site were asked to participate in a follow up phone interview about their reasons for selling their property. If willing, respondents were asked to leave their name, phone number, and best time of day to contact them. Because only two respondents returned a survey stating that they no longer owned property and were willing to participate in a phone interview, no additional discussion of that respondent category is provided in the following analyses.

Table 5 provides a detailed account of response rates and adjusted sample size. A total of 516 respondents currently owning residential property replied to the survey, yielding an overall corrected response rate of 35% after adjusting sample size for duplicate or incorrect addresses and other sampling frame errors. Response rates were similar between the two study areas: 37% of Bear Lake respondents replied, while 33%

Table 5. Response rates of mailed survey to two study sites.

	Bear Lake Valley	Star Valley
Adjusted N	724	736
Overall response rate	272 (37.6%)	244 (33.15%)
Seasonal resident response rate	168 (46%)	116 (31.5%)
Permanent resident response rate	104 (29%)	128 (34.8%)

of Star Valley respondents participated. Response rates by residency status were similar for Star Valley residents, but in Bear Lake almost half of seasonal residents responded while less than one-third of permanent residents replied to the survey. Although overall response rates were low, because initial sample size was calculated to achieve acceptable power, given a 30% response rate data should be sufficient to detect effects.

The mail survey (Appendix C) was divided up into several major sections. The first section asked questions regarding the reasons for owning property, attitudes towards change, and satisfaction with community life. The second section asked about community ties. The third section asked questions about anticipated participatory behavior, and the last section asked general demographic questions about the respondent's background.

Measurement and Analysis

Interviews

All in-person and phone interviews were transcribed, coded, and analyzed for the communities as a whole using a grounded theory approach (Glaser and Strauss 1967).

Qualitative approaches are common in community studies due to their ability to allow for emergent, unanticipated results (Sayre 2004). Grounded theory methodology, in particular, is an inductive approach in which researchers do not form hypotheses, but gather observations and identify trends in interviewee statements in order to form conceptual categories which can support or add to existing theories.

Mail Survey

All survey data were analyzed using the statistical package SPSS version 16 for Windows. Univariate, bivariate, and multivariate analyses were conducted using a pooled sample of individual data from both study areas. The decision to pool data across study sites was based on two factors: to allow for exploration of resident attitudes and behaviors across the region and to increase effective sample size for analysis. The two study sites were included as a dummy variable (1= Bear Lake Valley, 0 = Star Valley) to allow for an assessment of location-specific influences on resident attitudes and behavior. The choice of pooling individual level data did require the assumption that all data were random and independent, which was uncertain given that individuals are not randomly located across the landscape but reflect clusters of individuals across counties. Ignoring this cluster effect risks underestimating standard error and increasing the risk for Type I error (finding variables statistically significant when they are not). However, the lack of additional second order variables included for analysis, aside from county designation and an insignificant τ_0^2 (in an exploratory one-way ANOVA with random effects), suggested that Type I risk was minimal (Raudenbush and Bryk 2001).

Support for pooling data was also supported by similar response rates for residents between the two locations and by reasonably similar sampled population proportions. Approximately 17% of Bear Lake's population was sampled while, in Star Valley, roughly 19% of the population was sampled. Based on response rates, 6.4% of Star Valley property owners from the sampling frame participated in the survey while 6.3% of Bear Lake Valley property owners participated.

This study recognizes that the communities chosen for analysis were based on specific research objectives and may not be representative of all Intermountain West communities. Consequently, readers should be cautious in generalizing results beyond the two study areas.

Univariate and Bivariate Analytical Techniques

Univariate analyses were used to generate basic socio-demographic characteristics of respondents from both study sites as well as descriptive statistics for the primary independent variables. The primary analytical techniques for bivariate analysis were cross tabulation and one-way analysis of variance (ANOVA). Cross tabulation compares the frequency distribution of two or more variables simultaneously; distribution differences can then be assessed statistically using chi-square tests. For this study, cross tabulation was used to evaluate the statistical significance of categorical independent variables' frequency distributions based on residency status. One-way ANOVA evaluates within- versus between-group differences by comparing the mean responses of three or more groups and is used in this study to compare mean responses of respondents by residency status for ordinal or continuous dependent and independent variables.

Significant ANOVA findings were followed up with a post hoc test, which provides additional information about which group means differ significantly. Choice of post hoc test was based on Levene's test for variance equality and the test's ability to maintain alpha levels. For significant ANOVA results with equal variances, a Tukey HSD post hoc test was performed. For significant ANOVA results with unequal variances, Dunnett's C post hoc test was used (Cardinal and Aitken 2005).

While ANOVA requires several data assumptions, including normal distribution, independence, and equal variances, the approach is generally robust to minor violations. Levene's test for inequality of variances was run for each ANOVA; significant findings were noted by the use of the Dunnett's C post hoc test, as mentioned above. ANOVA results are more sensitive to Type I errors due to unequal variance when group sample sizes are highly unequal. Since, in this study's case, the non-resident sample size was significantly smaller than the seasonal or permanent resident group sizes, Welch's variance-weighted ANOVA was also run to assess the impact of sample size imbalance on ANOVA results. Because Welch's tests yielded similar results for between-group significance as one-way ANOVAs, they are not reported in the results.

The normality of dependent and independent variables was assessed using the Shapiro-Wilk test in SPSS. Similar to equality of variances, one-way ANOVA's F test is robust to skewness, unless sample sizes are highly unbalanced, are small, or extremely non-normal. Since all of the ordinal dependent and independent variables were found to be non-normal (even after transformation efforts), and non-resident sample sizes were significantly smaller than the other two residency status groups, Kruskal-Wallis tests were also run to compare mean ranks of respondents by residency status for variables of

interest. Kruskal-Wallis tests are a less stringent, non-parametric ANOVA equivalent and therefore provide an assessment of non-normal distribution influences on ANOVA results. Since Kruskal-Wallis and ANOVA tests yielded similar results, only ANOVA results are reported in this thesis.

Multivariate Analytical Techniques

Ordinary least squares (OLS) regression with dummy variables was used to assess residency status influence on resident community change attitudes and involvement in community affairs, when controlling for all other independent variables. Two of the three residency status categories were coded as dummy variables (0, 1) with permanent residents assigned as the reference category. Collinearity diagnostics were run for all regressions; VIF scores all were significantly lower than 4.0, suggesting no significant multicollinearity problems (Fox 1991). Regression analysis included both interval and ordinal data; nominal level data were recoded into dummy variables prior to inclusion in models.

OLS regression assumes that data are normally distributed, observations are random and independent, there is a linear relationship between independent and dependent variables, data are continuous, unbound, and not truncated, and that residual errors are equally distributed ("homoscedasticity"). Diagnostic and graphical tests for the four dependent attitude variables and eleven participatory variables found that these assumptions were generally met except for the assumption of normality and the requirement of non-truncated interval or near-interval data. The former violation, as previously mentioned, could not be effectively fixed using the natural log, square root,

power, or other transformations. The latter violation was due to the use of ordinal and count data with a limited range of values. Given the non-normality of the data and the ordered nature of dependent variables, multivariate analyses were originally run using ordinal logistic regression.

The use of logistic regression is most common when dependent variables are dichotomous or have more than two classes, while independent variables are allowed to be of any type, from nominal to interval in nature. Logistic regression allows researchers to predict changes to the odds that the dependent variable equals one, based on the values of independent variables in the model. Results are typically explained in terms of odds ratios, that is, the odds or likelihood of a certain event occurring.

Logistic regression serves as an appropriate method when data cannot meet the more stringent assumptions of OLS regression. Logistic regression does not require an assumption about linearity between independent variables and the dependent variable, it does not require normal distribution, and it does not assume homoscedasticity, so it often serves as a better model choice for survey-type data. Logistic regression's main two requirements are that independent variables be linearly related to the dependent logit and that observations are independent (Agresti and Finlay 1997).

The choice of type of logistic regression is based on the structure of the dependent variables. Variables that have an ordered nature, such as low, medium, or high intensity, are best addressed by using ordinal logistic regression, since choosing a binary logistic approach that collapsed the categories would reduce the amount of information available, while choosing a multinomial approach would ignore the ranking information and lead to a less parsimonious model. Ordinal logistic regression does carry one key assumption

that must be met for results to be valid: the relationship between all outcome group pairs must be the same. The parallel lines regression test was run in SPSS to test this proportional odds assumption.

For this study, two of the four attitudinal variables and six of the eleven participatory variables failed the proportional odds assumption, even after trying two different proportional odds definitions: cumulative logit and adjacent categories. Analyses were re-run using OLS regression, yielding independent variable signs and significance levels that were similar to results conducted using ordinal logistic regression. Given that assumptions were violated using both approaches and that results were relatively consistent across tests, the choice was made to follow the trend in the sociology literature by reporting results using OLS regression. The choice of OLS regression methodology was also supported by the central limit theorem, which assumes that for large sample sizes the sampling distribution will still be normal even if the error is not normally distributed. Similarly, the use of ordinal data in OLS regression models is a common practice in social science and is supported by studies that show statistical test robustness to ordinal distortion (e.g., Labovitz 1967, 1970, Kim 1975). Other methods, such as multinomial logistic or binary logistic regression, were rejected due to the loss of information resulting from such approaches.[5]

Two revisions to this approach were necessary during data analysis, however. The majority of respondents did not choose any monetary actions across the ten

[5] Negative binomial regression models were also run for participatory dependent variables (since they utilize count data) to verify that OLS model results did not yield biased estimates of standard errors as a result of unequal variances and truncated values. Variable signs and significant levels remained consistent with OLS results, supporting other diagnostic and graphical tests. Consequently, OLS results were reported for their ease of interpretation.

scenarios, leading to a binary response pattern. A similar binary response pattern was also evident for the two dependent variables assessing resident likelihood of out-migration. Consequently, binary logistic regression was chosen as the appropriate analysis technique for these three models. The second exception involved the four dependent variables assessing residents' intention for involvement for specific issues. These variables, in addition to failing the assumptions of OLS regression discussed above, also exhibited a moderate degree of heteroscedasticity. Graphical and diagnostic tests supported the use of a square root transformation as a method of minimizing unequal variances for the four variables (although the distribution was still non-normal). Consequently, OLS regressions were run using the transformed data.

For all analyses, overall model fit was assessed using the likelihood ratio test or adjusted R-squared measure, depending on whether logistic regression or OLS regression was run, while individual variable significance was assessed using the Wald or t-statistic. Standardized beta weights were used for discussion of statistical significance of independent variables in OLS regression, as they allow for comparisons of variables with different metrics or when metrics are arbitrary, as in Likert-type scales (Menard 2002). The size of beta weights was also examined to determine which variables had the strongest predictive value. The independent variable with largest beta weight, after controlling for all other variables, has the largest unique explanatory effect on the dependent variable for a standard unit increase in the independent variable. For binary logistic regression results, odds ratios were used for discussing statistical significance; the greater distance from 1, the more significant the variable in predicting the likelihood of the dependent variable occurring.

To assess the significance of the dummy variables for residency status, both individual log-likelihood ratio and t-tests were analyzed, as well as incremental or "block" chi-square or F tests, comparing model fit measures based on a full model versus a model with the variables in the dummy set dropped. Block tests were performed because individual parameter tests cannot assess the amount of shared variance explained by a set of dummy variables and because individual Wald statistics can lead to increased Type II errors when large logit coefficients or dummy variables are involved (Menard 2002).

Regression results were examined at 0.1, 0.5, 0.01, and 0.001 levels of significance to determine whether the relationship between dependent and independent variables was statistically significant. For consistency throughout the manuscript, statistically significant results are coded as follows: † =$p<0.1$, * = $p<0.05$, ** = $p<0.01$, and *** = $p<0.001$.

Independent Variable Coding and Factor Analyses

The primary independent variable assessed was residency status. Residency status was measured by asking respondents to choose a statement that best fit their current residence status, coded as: I live here year round = 1; I live here more than 3 months every year = 2; I live here for a total of 1-3 months every year = 3; I visit here for a total of less than 1 month every year = 4; and I don't ever live here (my property is not developed or used as a rental or business property only) = 5. After initial assessment of findings, the category was recoded as: permanent residents = 1; seasonal residents = 2

(originally coded as 2, 3, or 4); and non-residents = 3 (originally coded as 5) for use in analysis.

To a lesser degree, length of residence also was explored as an independent variable explaining resident attitudes and behavior. Length of residence was measured by asking respondents how many years they had owned their residential property. If respondents owned more than one piece of property in the study area, they were asked to answer based on the property they owned the longest. All responses were coded as written by respondents, ranging from zero to 100 years. Length of residence was recoded as "nine years or less" = 0 and "ten years or more" = 1 for analysis.

Because the literature review suggested that various socio-demographic characteristics may play a role in influencing attitudes and behavior, several additional control variables were included in the study: age, religion, education level, childhood community size, income, and gender.

Age was measured by asking respondents to list their age; all responses were coded as written by respondents, from 20 to 95 years of age.

Religious affiliation was measured by asking respondents to select their religious association. Answers were coded as: Church of Jesus Christ of Latter-day Saints (LDS) = 1; Catholic = 2; Protestant = 3; Jewish = 4; other = 5; and none = 6. Because the category with the highest percentage of respondents by far was LDS, religious affiliation was recoded as a dummy variable for analysis in attitude regressions, with LDS = 1 and all other categories = 0.

Education level was measured by asking respondents to select the highest level of education they had achieved. Answers were coded as: did not finish high school = 1;

completed high school or GED = 2; some college but no degree = 3; associates or vocational degree = 4; college bachelor's degree = 5; some graduate work = 6; and completed graduate degree, masters or PhD = 7. Education level was recoded as a dummy variable for analysis, with associates/vocational degree or more experience = 1 while some college or less experience = 0.

Childhood community size was measured by asking respondents in what size community they spent the majority of their childhood (up to age 18). Data were coded as: very small town = 1; small town or village = 2; smaller city = 3; medium-size city = 4; and metropolitan city = 5. Childhood roots was recoded as rural = 1 (small town or village or very small town) and urban (all other categories) = 0. Gender was measured by asking respondents whether they were male or female.

Females were coded as 1 and males as 0.

Annual household income was measured by asking respondents to select the income category that best described their household income before taxes in 2006. Answers were coded as: <$10,000 = 1; $10,000-19,999 = 2; $20,000-39,999 = 3; $40,000-59,999 = 4; $60,000-79,999 = 5; $80,000-99,999 = 6; and $100,000 or more = 7. Income level was recoded as a dummy variable for analysis, with $60,000 or more =1 while <$60,000 = 0.

Study areas were coded as: Bear Lake Valley = 1 and Star Valley = 0.

Attitude Studies. For resident attitude studies, six other independent variables were included for analysis: development activity, study area, resident values for property ownership, place attachment, respondent knowledge about community affairs, and level of community satisfaction relative to five years ago.

Place attachment was measured using a composite index of four Likert scale statements: "I am very attached to Bear Lake (or Star Valley);" "I get more satisfaction out of being in Bear Lake (or Star Valley) than any other place;" "No other place can compare to Bear Lake (or Star Valley);" and "Bear Lake (or Star Valley) means a lot to me."

Respondents were given the choice of scoring each statement from 1 = "strongly disagree" to 5 = "strongly agree." Sampling adequacy was measured by means of the Kaiser-Meyer-Olkin (KMO) measure, which tests whether partial correlations among variables are small; a KMO measure of 0.804 indicated sufficient sampling adequacy. Factor analysis yielded a single factor outcome explaining 76.89% of the variability in observed variables. A reliability analysis of this index yielded inter-item correlations ranging from 0.594 to 0.716 and a Cronbach's alpha coefficient of 0.90. Based on the factor analysis, scores for the four statements were summed to create a single index value of 4-20 for place attachment.

Residents' knowledge about community affairs was measured by a composite index of two Likert scale questions: "How often do you read the articles you see written about your community's affairs and politics in local newspapers, newsletters, or other printed material;" and "How often do you talk about community affairs and politics with friends, family, and/or neighbors?" Respondents were given the choice of scoring each question from 1 = "never" to 5 = "very often." Factor analysis yielded a single dimension that included both statements, explaining 78.85% of the variance in observed variables. A reliability analysis of this index yielded a Cronbach's alpha coefficient of

0.731. The summed index of the two questions, ranging from 2 to 10, was used for analysis.

Respondent level of satisfaction with their community, relative to five years previously, was measured by asking respondents to rate their satisfaction level as: 1= more; 2 = equal; 3 = less; and 4 = I wasn't in this community five years ago. Results were recoded as: 0 = equal to more satisfied and 1 = less satisfied for analysis.[6]

Development activity was measured by asking respondents if they had ever participated in any of four activities: sold land to developers, provided financial support, built subdivisions, or other activity (asked to describe). Results were coded as: no = 0 or yes = 1 if they participated in any of the above activities.

Resident values regarding their Bear Lake or Star Valley property were assessed using a list of 12 items that were measured using a Likert-type scale ranging from 1 = "not at all important" to 4 = "very important. Factor analysis was used to decompose the correlation matrix of the 12 items into their factors. The KMO measure was 0.720, suggesting adequate sampling distribution for analysis. Factors were rotated using direct Oblimin method, assuming correlated factors. Table 6 shows the SPSS three-dimension outcome based on eigenvalues greater than one, with loadings less than 0.1 suppressed. The social-based value component is a summed index of five variables: lived here all my life, grew up in the area and came back, have friends and family in the area, moved here for job related reasons, and it's a good place to raise kids. The nature-based value component is a summed index of five variables: recreational opportunities, natural

[6] Because the majority of respondents chose a satisfaction level of equal or more satisfied, the question was recoded as described above. Respondents not present in the community five years ago were recoded as system missing.

Table 6. Factor loadings for resident property values.

	Component Factor Loadings		
	Nature-based	Social-based	Financial-based
I enjoy the area's natural beauty	**.889**		
I enjoy the area's rural atmosphere	**.872**		
I enjoy the recreational opportunities	**.854**		-.138
It's a good place to get away from everyday life	**.809**	-.158	.129
I like the slow pace of life	**.713**	.204	
I grew up in the area, moved away, and wanted to come back		**.880**	
It's a good place to raise kids		**.853**	-.148
I've lived here all my life		**.848**	
I have family and friends that live in the area		**.758**	
I moved for job related reasons	-.100	**.659**	
It's an affordable place to live	.360	.430	.237
It's a good financial investment			**.966**

beauty, slow pace of life, rural atmosphere, and a place to escape. The financial-based value component consists of a single measure of investment worth.

Correlations between the three components ranged from 0.061 to 0.298, suggesting that the factors do measure different aspects of resident values for property ownership. A reliability analyses of the indices yielded inter-item correlations ranging from 0.418 to 0.516 for the nature index and 0.394 to 0.733 for the social index; Cronbach's alpha coefficients were 0.709 and 0.879, respectively. Because the financial value was a single item, intra-item correlations and alpha coefficients were not

applicable. The three factors cumulatively explained 68.68% of the variability among observed variables.[7]

Although also not used in multivariate analysis, respondent willingness to pay for different community management goals was assessed by asking respondents to divide a hypothetical $100 contribution among six different goals: maintain traditional ranching and agricultural land production, improve the economic condition of the community, maintain a small-town feel, provide adequate community services, guide where and how new permanent homes are built, and guide where and how new seasonal homes are built. Answers were coded as written by respondents, ranging from 0 to 100 for each goal.

Participation Studies. For studies of public participation, demographic variables (age, gender, religious affiliation, childhood community size, and income) and four additional independent variables were assessed for their influence on participation patterns. The variables not previously discussed were: political orientation, social networks, resident resources, and motivation to act.

Resident socioeconomic status (SES) and civic resources were assessed using a series of measures: a four question Likert-type scale measuring respondent civic skills and a measure of annual household income (previously described). Civic skill was measured using a composite index of four Likert scale statements: "If I spoke up at a meeting, people would listen to what I had to say;" "If I wanted to write a letter to a local official about an issue that concerned me, I could convey my point effectively;" "I will take an action that I feel is right regardless of what others around me think;" and "I have

[7] Additional analysis of the social-based value index revealed a strong (0.8) correlation with permanent resident status, however, so the variable was removed from multivariate analysis to avoid multicollinearity problems.

the free time to participate in community affairs." Respondents were given the choice of scoring each statement from 1 = "strongly disagree" to 5 = "strongly agree."

Factor analysis yielded a single factor outcome explaining 48.3% of the variability in observed variables with a KMO of 0.614. A reliability analysis of this index yielded inter-item correlations ranging from 0.176 to 0.527 and a relatively low Cronbach's alpha coefficient of 0.635. Further analysis suggested that two statements, "If I spoke up at a meeting, people would listen to what I had to say" and "I have the free time to participate in community affairs," should be treated as individual predictors rather than as a summed index. Cronbach's alpha coefficient improved to 0.696 with an intra-item correlation of 0.534 based on the reduced scale including only letter writing skill and an ability to take action. Consequently, the two statements were summed into a single index ranging from 2-10 for analysis purposes.

Resident political orientation was assessed using a list of 8 statements measured using a Likert-type scale ranging from 1 = "strongly disagree" to 5 = "strongly agree." Factor analysis was used to decompose the correlation matrix of the 8 items into their factors, with a KMO measure of 0.796. Factors were rotated using direct Oblimin method, assuming correlated factors. A three-dimension solution was reached (Table 7) based on a criterion of including factors having eigenvalues greater than 1.0, with loadings less than 0.1 suppressed. The trust component is a summed index of four variables: faith in elected leaders, trust that leaders will act in the respondent's best interest, available opportunities for involvement, and a belief that leaders will listen to everyone's opinions. The efficacy component is a summed index of three items: social norms for participation, belief that residents should be involved, and belief that personal

Table 7. Factor loadings for resident views of the political process.

	Component Factor Loadings		
	Trust in Leaders	Political Efficacy	Community Control
I have faith in our elected local officials to make good community decisions.	**.948**		
I trust my local political leaders to act in my best interest.	**.929**		
Community leaders will listen to and consider everyone's opinions before making community decisions.	**.911**		
There are plenty of opportunities for participation in my community.	**.530**	.220	-.351
Other members of the community expect me to participate in community affairs.		**.781**	.150
Local residents should play a large role in shaping community decisions and policies.		**.692**	
My personal actions can have a strong impact on community decisions and outcomes.	.227	**.670**	-.130
Most of our community decisions are determined by external forces beyond the control of our local government.			**.970**

actions will influence decisions. The community control component consists of a single measure of perceived external control over community decisions.

Correlations between the three components ranged from 0.131 to 0.262, suggesting that the factors measure different aspects of resident views of the political process. A reliability analyses of the indices yielded inter-item correlations ranging from 0.199 to 0.402 for the efficacy index and 0.451 to 0.796 for the trust index; Cronbach's alpha coefficients were 0.558 and 0.869, respectively. Because the community control component was a single item, intra-item correlations and alpha coefficients were not

applicable. The three factors cumulatively explained 71.3% of the variability among observed variables.

As political efficacy's Cronbach's alpha coefficient was considerably less than the typical acceptability threshold of 0.7 (Nunnaly 1978), and respondents appeared to answer the civic resource statement, "If I spoke up at a meeting, people would listen to what I had to say" as a measure of voice, not speaking ability, an additional factor analysis was run incorporating the voice statement into the existing efficacy scale. Factor analysis suggested a single component solution with a higher alpha coefficient of 0.631. Although this coefficient was still lower than preferred, exploratory model building suggested that there was no statistical difference between models incorporating efficacy as a four-item scale or as four individual items. Since using the former approach yielded a more parsimonious model, the choice was made to use the four-item efficacy scale in all analyses.

Resident motivation to act was assessed by a list of 7 items measured using a Likert-type scale ranging from 1 = "Not at all likely to take action" to 4 = "Very likely to take action." Factor analysis was used to decompose the correlation matrix of the 7 items into their factors. The KMO measure was 0.790, suggesting adequate sampling distribution for analysis. Factors were rotated using direct Oblimin method, assuming correlated factors. Table 8 shows the two-dimension outcome based on eigenvalues greater than 1.0, with loadings less than 0.1 suppressed. The "greater good" component is a summed index of four variables: actions benefiting the community, actions benefiting the environment, leaders tell me I should get involved, and family and friends affected by

Table 8. Factor loadings for resident motivation to act.

	Component Factor Loadings	
	"Greater Good"	Personal Motivation
My actions will benefit the community.	**.896**	
My actions will benefit the environment.	**.889**	-.100
My community leaders tell me I should get involved.	**.775**	
My family and friends will be affected by the change.	**.538**	.366
The proposed change has a direct economic benefit to me.	-.169	**.948**
I would receive some non-economic benefit (e.g., an increase in knowledge, community status, or political influence)	.133	**.716**
The proposed change has a direct economic cost to me.	.294	**.501**

the change. The personal motivation component is a summed index of three variables: direct economic cost, a non-economic benefit, and a direct economic benefit.

There is a moderate correlation of 0.454 between the two factors. A reliability analyses of the indices yielded inter-item correlations ranging from 0.428 to 0.717 for the greater good index and 0.296 to 0.523 for the personal motivation index; Cronbach's alpha coefficients were 0.834 and 0.673, respectively. The two factors cumulatively explained 66.1% of the variability among observed variables. Because the alpha coefficient was close to the acceptability threshold, and use of the scale yielded a more parsimonious model then treating items separately, the decision was made to accept the scale for analysis purposes.

Resident social networks were assessed by two questions. Resident previous recruitment for leadership positions was assessed by asking the question, "Have you ever been asked to serve in a leadership role in Bear Lake (or Star Valley)?" Respondents

were given the choice of scoring each question from 1 = "never" to 4 = "often." Because the majority of respondents chose "never," the variable was recoded to 0 = "never" and 1 = "rarely to often." Respondents' social ties was assessed using a list of 5 items measured using a Likert-type scale ranging from 1 = "strongly disagree" to 5 = "strongly agree."

Factor analysis was used to decompose the correlation matrix of the 5 items into their factors. The KMO measure was 0.731, suggesting adequate sampling distribution for analysis. Factors were rotated using direct Oblimin method, assuming correlated factors. Table 9 shows the two-dimension outcome based on eigenvalues greater than 1.0, with loadings less than 0.1 suppressed. The "local social connections" component is a summed index of three variables: knowing long-term families, having met most year-round residents, and having friends, family, or neighbors in political, religious, or business-related positions of authority. The "other social connections" component is a summed index of two variables: feeling welcome in the community and knowing seasonal residents.

There is a moderate correlation of 0.306 between the two factors. A reliability analyses of the indices yielded inter-item correlations ranging from 0.679 to 0.732 for the local social connections index and an intra-item correlation of 0.274 for the external connections index; Cronbach's alpha coefficients were 0.878 and 0.430, respectively. The two factors cumulatively explained 74.4% of the variability among observed variables. Given the low correlation between the two items of the external connections index, the choice was made to treat them as separate, individual items in bivariate and multivariate analyses.

Table 9. Factor loadings for resident social connections in Bear Lake or Star Valley.

	Component Factor Loadings	
	Local Social Connections	Other Social Connections
I know most of the long-term, established families in Bear Lake (or Star Valley).	**.945**	-.115
Many of my friends, family, and/or relatives are business, church, or political leaders in Bear Lake (or Star Valley).	**.871**	
I've met most of the year-round residents in my Bear Lake (or Star Valley) community.	**.824**	.163
The other residents make me feel welcome in my Bear Lake (or Star Valley) community.	-.128	**.911**
I've met most of the seasonal residents in my Bear Lake (or Star Valley) community.	.275	**.617**

Out-migration Studies. For studies of potential out-migration behavior, demographic variables used in attitudes analysis (age, gender, religious affiliation, education, income, and childhood community size) were utilized as previously discussed.

Dependent Variable Coding and Factor Analyses

To test the research hypotheses regarding resident attitudes towards community change, resident attitudes were measured using a list of ten Likert-scale statements. Respondents were given the option of scoring each statement from 1 = "strongly disagree" to 5 = "strongly agree." Factor analysis was used to decompose the correlation matrix of the ten items into their constituent factors, using direct Oblimin rotation. Initial results suggested a three-dimensional result based on eigenvalues greater than one, with loadings less than 0.1 suppressed (Table 10).

Table 10. Factor loadings for components of resident attitudes about community change.

	Component Factor Loadings		
	Capacity to Grow	Control over Development	Limited Options
We could benefit if more people moved into our community	**.814**		
Our community can support additional population growth	**.799**	-.185	-.331
There is plenty of open space still available in the community	**.732**		
The benefits of tourism outweigh the costs to our community	**.565**	.180	.444
I support agricultural land preservation in my community	-.420	.290	-.143
Citizens should not have the right to develop private property in ways that may negatively impact our community or the surrounding environment		**.771**	-.168
Private citizens should not have the right to buy, sell, and develop land as they please without being restricted by regulations		**.701**	.140
Policies are needed to manage the rate of growth and development in our community	-.208	**.667**	
Tourism development is our only means of improving the economic condition of our community	.241		**.750**
Managing growth and development will do little to control the pace of change in our community	-.238	-.446	**.622**

The capacity to grow dimension included two statements regarding population growth, "we could benefit if more people move into our valley" and "our community can support additional population growth." The second statement was rescaled to conform directionally to the other items. In addition, the dimension included two other

statements: “there is plenty of open space still available in the community,” and “the benefits of tourism development outweigh the costs to our community.”

The control over development component incorporated two statements regarding property rights: “private citizens should not have the right to buy, sell, and develop land as they please without being restricted by regulations,” and “citizens should not have the right to develop private property in ways that may negatively impact our community or the surrounding environment.” The first statement was rescaled to conform directionally to the other items. The dimension also included the statement, “policies are needed to manage the rate of growth and development in our community.”

The limited options component incorporated two statements regarding residents’ perceived control over community growth and economic options: “tourism development is our only means of improving the economic condition of our community,” and “managing growth and development will do little to control the pace of change in our community.”

The statement regarding agricultural preservation was not included in any of the three dimensions, and specifying a four dimensional model that included agriculture diminished the clarity of meaning for the other three dimensions. Since attitudes towards agricultural preservation remained an important research consideration, however, the item was included as a single dependent variable for later analysis.

The KMO for the three factor outcome was 0.775. Reliability analyses of the indices yielded inter-item correlations ranging from to 0.432 to 0.546 and a Cronbach’s alpha coefficient of 0.753 for the capacity to grow component. The control over development component yielded intra-item correlations of 0.293 to 0.406 and a

Cronbach's alpha of 0.634. The limited options component had an intra-item correlation of 0.205 and a Cronbach's alpha coefficient of 0.341. Correlation between the three components was minimal, ranging from 0.118 to 0.206, providing further evidence in support of three distinct dimensions of resident attitudes. The three-factor outcome explained 59.06% of the variability in observed variables.

To test research hypotheses regarding public participation, eleven dependent variables were examined in bivariate and multivariate analysis: two general community involvement variables, five participation variables based on the type of action selected, and four participation variables based on specific scenarios.

Resident self-reported involvement in political affairs was measured by asking respondents how often they participated in aspects of community life while staying in Bear Lake or Star Valley. Respondents were given the choice of responding as: 1 = never; 2 = rarely; 3 = sometimes; 4 = often; or 5 = very often for seven different activities: property, family, informal social, formal social, political, economic, and recreation activities. Answers were coded as written by respondents.

Resident inclination for involvement in community affairs was measured by providing a series of hypothetical community changes and asking respondents what action(s), if any, they would be most likely to take. Respondents were provided with ten hypothetical changes: 1) a new subdivision is proposed in your community; 2) road traffic and noise worsen in your community due to additional summer tourists; 3) your public land access is restricted by new hillside homeowners; 4) the community plans to close a middle school due to low student enrollment; 5) residential development in the valley reduces the quality and quantity of existing water resources; 6) county

commissioners propose bringing in an ethanol plant, which some residents fear may pose a health or safety risk; 7) your property taxes increase to cover new sewer and water lines; 8) construction of nearby new homes reduces your views of the surrounding mountains or lake from your house; 9) residential development in your community places a strain on existing police and ambulance services; and 10) community leaders propose a ban on further development in your area for the next five years. Choice of hypothetical scenarios was based on qualitative interviews; changes were chosen from resident discussion of issues that had either already occurred or were believed to possibly occur in the near future for Bear Lake and/or Star Valley.

For each scenario, respondents were provided with 8 hypothetical actions: 1) do nothing; 2) talk to friends, family, or neighbors about the issue; 3) contact a community leader or homeowner's association for more information; 4) give money to efforts that will support or oppose the change; 5) attend public meetings; 6) form or join a community group to address the issue; 7) take any other action (e.g., write a letter to the editor, serve on a government board, or vote on a proposed change); or 8) move from your community. Choice of hypothetical actions was based on key informant interviews regarding common forms of resident participation in their community, as well as previous literature research designs.

For every action within each scenario, responses were coded as 1 if selected by respondents or 0 if not selected, assuming at least one action was selected. Responses were coded as system missing if a scenario was left entirely blank. Do nothing and move from your community were then recoded to 0 for analysis purposes since they reflected non-actions. Finally, data were clustered to reduce dimensionality and form meaningful groups

for analysis purposes with the goal of looking at data two ways: as a measure of intensity of potential participation and as a measure of type of action.

Intensity of participation. The former goal was achieved by first creating an overall measure of potential involvement by summing the total number of actions selected across all scenarios, ranging from 2 to 47. Differences in intensity of involvement by scenario type were then evaluated by summing the total number of actions selected by respondents within each scenario, ranging from 0 to 6. MDS and factor analysis were run on the 10 scenario indices; as results were similar across techniques, only the factor analysis results are presented here. Factor analysis yielded a two-factor solution with a KMO of 0.883, explaining 62% of the variance observed in variables (Table 11).

The two-factor solution grouped scenarios into high and low response categories, based on their relative interest to respondents (as measured by the number of hypothetical actions selected). The high response category included a proposed subdivision, increased road traffic and noise, restricted public land access, proposed school closure, and degraded water resources. The low response category included strained community services, proposed development ban, reduced views, and increased property taxes. The high involvement component had intra-item correlations ranging from 0.599 to 0.756 with an alpha of 0.879. The low involvement component had intra-item correlations ranging from 0.331 to 0.547 with an alpha of 0.728.

Residency status-based differences in high and low involvement scenario groups were explored by comparing factor analysis outcomes by residency status. In general, residency status-specific results remained consistent with overall trends, yielding high and

Table 11. Factor analysis results for intensity of involvement by scenario.

	Component Factor Loadings	
	High Involvement Scenarios	Low Involvement Scenarios
A new subdivision is proposed in your community.	**.913**	
Residential development in the valley reduces the quality and quantity of existing water resources.	**.881**	
Road traffic and noise worsen in your community due to additional summer tourists.	**.879**	-.106
Your public land access is restricted by new hillside homeowners.	**.806**	
The community plans to close a middle school due to low student enrollment.	**.612**	
County commissioners propose bringing in an ethanol plant, which some residents fear may pose a health or safety risk.	.455	.453
Community leaders propose a ban on further development in your area for the next five years.	-.129	**.849**
Residential development in your community places a strain on existing police and ambulance services.		**.752**
Construction of nearby new homes reduces your views of the surrounding mountains or lake from your house.		**.682**
Your property taxes increase to cover new sewer and water lines.		**.653**

low response categories that were inclusive of the above scenarios. Relevant differences that emerged included: 1) the inclusion of a proposed school closing as a high response category item for permanent residents and low response for seasonal and non-residents; 2) the inclusion of a proposed ethanol plant as a high response item for permanent residents

and a low response category item for seasonal residents; and 3) the inclusion of property tax increases as a high response category item for non-residents and low response category for permanent and seasonal residents.

Based on the above results, four scenarios were chosen as case studies for analysis purposes: two high involvement scenarios, including a proposed subdivision and water resource degradation; a "mixed" involvement scenario – the proposed school closure; and one low involvement scenario – the development ban.

Choice of actions. The latter goal of comparing choice of actions across scenarios was explored by hierarchical clustering of dichotomous variables using the simple matching coefficient approach and Ward's method algorithm (Finch, 2005). Steinbach et al. (2004) stated that for nominal data, matching coefficients provides a more effective clustering method than using measures of distance, yielding measures between zero and one based on the number of attributes shared between compared variables. Two common similarity coefficients for binary vectors are the similar matching coefficient and the Jaccard coefficient. The former considers all matches to be significant (both zeros and ones), while the latter only considers ones matching to be significant. For this study, the former approach was used, although both yielded similar clustering patterns. The choice of algorithm was based on a desire for distinct cluster separation and internal consistency of clusters.

An excerpt from the cluster tables is presented in the Appendix D2 and supports the notion that similar actions are generally taken across scenarios. Consequently, "type of action" indexes were created by summing the total number of actions taken across all scenarios for six types of actions assessed (talk, contact officials, give money, attend

meetings, form group, or other action), leading to indexes ranging from 0 to 10. Analysis of the "other action" category, however, revealed that respondents had a high level of uncertainty about the purpose of said action, making results largely inconclusive. Consequently, "other action" was removed from analysis and discussion.

To test research hypotheses regarding out-migration, two dependent variables were examined in bivariate and multivariate analysis: a variable assessing current expectation to move from the area in the next five years and a variable assessing movement from the community in response to proposed community change scenarios. Scenarios were as previously described in previous paragraphs. For every scenario, "move from your community" was coded as 1 if selected by respondents or 0 if not selected. The total number of actions was summed for the entire set of scenarios, ranging from 0 to 5. Because 69% of respondents selected zero out-migration actions across the ten scenarios, the variable was recoded as 0 = "no action" and 1 = "1 or more actions" for analysis purposes. Responses to the question, "Do you expect to sell your property and move from the area in the next five years" were coded as 1 = "definitely will not move;" 2 = "probably will not move;" 3 = "probably will move;" and 4 = "definitely will move." Similar to the previous variable, because 84% of respondents were probably or definitely not moving in the next five years, the variable was recoded as 0 = "not moving" and 1 = "moving" for analysis purposes.

CHAPTER 4

RESIDENT ATTITUDES TOWARDS AMENITY GROWTH-RELATED COMMUNITY CHANGE

Introduction

Attitudinal studies have become increasingly common tools for exploring community conflict concerns resulting from differing identities and values about community goals, development pace, and resource allocation held by residents in Western communities (Jobes 1995, Price and Clay 1980). Studies of socio-demographic and residency status-based differences in resident attitudes towards amenity growth-related development have provided mixed results, however. Some studies tend to support initial assumptions that urban newcomers and/or seasonal residents are more pro-environmental, more politically active, and generally want to stop or slow development (e.g., Cockerham and Belvins 1977, Graber 1974, Theodori et al. 1998), while other studies have provided conflicting results (e.g., Clendenning 2004, Connelly and Brown 2001, Marcouiller et al. 1996, Sofranko and Williams 1980). This chapter further explores individual attitudes in the rural West, in particular looking at residency status as a means of differentiating resident response to amenity growth-related change.

Survey Findings

A socio-demographic analysis of respondents, frequency distributions, and univariate, bivariate, and multivariate results exploring the relationship between key

independent variables and community change attitudes are reported below. Readers are referred to pages 62-67 and 75-78 of Chapter 3 for discussion of analytic approaches and variable descriptions.

Socio-demographic Analysis

Table 12 presents the basic socio-demographic characteristics of respondents from both study areas. Bear Lake residents are older than Star Valley residents and have a somewhat higher percentage of male respondents. In both study areas respondents are primarily married, have a median annual household income of $60,000 to $79,000, and are Republican with a median household size of two people. More Star Valley residents are currently employed, have a higher percentage of associate's or college degrees, and a significantly lower percentage of LDS respondents relative to Bear Lake respondents. Star Valley respondents also have a higher percentage of respondents that have lived in the area for ten year or less. Survey participation by residency status differs for the two study areas as well. Bear Lake Valley had higher levels of response from seasonal residents relative to Star Valley, while the Star Valley sample had a higher percentage of both permanent residents and non-residents.

Cross tabulation results suggest that respondents differ in their socio-demographic characteristics by residency status (Table 13). Permanent residents tend to be younger than both seasonal and non-residents; seasonal residents have the highest percentage of respondents in the oldest age category of age 65 and up. There were no differences in gender, marital status, or political orientation by residency status. However, non-

Table 12. Respondents' socio-demographic characteristics by study site.

Variable	Bear Lake	Star Valley
Median Age	61	53
Gender: Male (pct.)	64.2	53.4
Marital Status: Married (pct.)	87.4	82.9
Median Household Income Category	$60-79,000	$60-79,000
Employed by Company or Business (pct.)	34.1	42.3
Retired (pct.)	42.3	29.5
Education (pct.)		
Did not Finish High School	1.9	0.8
High School	11.7	8.8
Some College Work	28.2	20.0
Associates or Vocational Degree	10.9	21.3
College Degree	18.4	23.3
Some Graduate Work	10.2	10.8
Graduate Degree	18.8	15.0
Politics (pct.)		
Republican	56.9	61.8
Democrat	15.7	16.0
Other	29.4	22.2
Religion (pct.)		
LDS	76.7	38.2
Other	15.4	41.4
None	7.9	20.4
Median Household Size (persons)	2	2
Length of Residence (pct.)		
10 years or less	30.9	58.5
11 years or more	69.1	41.5
Residency Status (pct.)		
Permanent	38.1	52.5
Seasonal	57.4	30.3
Non-resident	4.4	17.2

residents were statistically less likely to indicate membership in the LDS Church than either seasonal or permanent residents and also were more likely to have owned property for ten years or less. Seasonal residents had the lowest percentage of respondents with children under 18 living at home, while permanent residents were more likely to have lived in rural, low population settings relative to seasonal and non-resident respondents.

Table 13. Socio-demographic characteristics of respondents by residency status.

Variable	Permanent Residents	Seasonal Residents	Non-residents	Chi-Square	
Age (pct.)				69.1	**
18-29	7.6	0.4	0.0		
30-39	14.2	3.6	7.8		
40-49	21.3	10.2	17.6		
50-64	36.4	41.8	56.9		
65 and up	20.4	44.0	17.6		
Gender: Male (pct.)	56.4	62.9	52.9	2.82	
Marital Status: Married (pct.)	84.3	88.3	76.0	11.2	
Political Orientation (pct.)				11.2	
Republican	61.4	58.1	55.8		
Democrat	15.2	14.3	23.1		
Other	23.4	27.6	21.1		
Religious Affiliation (pct.)				44.8	**
LDS	64.1	61.0	23.4		
Other	22.4	29.5	41.9		
None	14.5	9.5	27.7		
Percentage of Households with Children under 18	35.1	14.0	20.4	28.4	**
Length of Residence (pct.)				9.6	**
10 years or less	43.6	40.0	64.0		
11 years or more	53.4	60.0	36.0		
Size of Childhood Community (pct.)				54.5	**
< 2,500	47.5	21.3	16.0		
2,500-5,000	10	13.6	16.0		
5,000-25,000	12.7	16.3	34.0		
25,000-100,000	15.4	21.7	22.0		
>100,000	14.5	27.1	12.0		

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

A comparison of socioeconomic characteristics of respondents by residency status, using cross tabulation, found significant differences based on household income, employment status, and education (Table 14). Seasonal and non-residents had a significantly higher percentage of respondents with graduate educations and an annual

Table 14. Socioeconomic characteristics of respondents by residency status.

Variable	Permanent Residents	Seasonal Residents	Non-residents	Chi-Square
Household Income (pct.)				66.6 **
< $10,000	1.4	0.5	0.0	
$10,000-19,000	2.9	1.5	0.0	
$20,000-39,999	19.7	9.3	8.0	
$40,000-59,999	26.0	17.2	4.0	
$60,000-79,999	23.1	16.2	12.0	
$80,000-99,999	12.5	13.7	18.0	
$100,000 or more	14.4	41.7	58.0	
Employment Status (pct.)				31.9 **
Employed for Pay by Company or Business	45.9	28.8	44.2	
Self-employed	20.5	16.8	28.8	
Retired	27.5	47.8	25.0	
Education (pct.)				37.1 **
Did not Finish High School	1.7	0.9	2.0	
High School	15.7	4.9	9.8	
Some College Work	22.3	29.8	9.8	
Associates or Vocational Degree	18.3	12.0	21.6	
College Degree	21.8	18.7	23.5	
Some Graduate Work	9.6	22.6	9.8	
Graduate Degree	10.5	22.2	23.5	

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

income of $100,000 or greater relative to permanent residents. Seasonal residents also had a higher percentage of retired respondents than the other two groups.

In summary, the two study areas have similar political orientation, education levels, annual household income, gender ratios, and marital status. Most variable differences, such as age, religious affiliation, length of residence, and employment status, that appear to be a result of different study sites, however, can be more appropriately explained via residency status differences among respondents.

To test for non-respondent bias in survey results, respondent socio-demographic characteristics were compared to 2000 U.S. Census data for the two study sites. Readers are referred to Chapter 3, pages 40 to 43, for a detailed census data discussion for Bear Lake and Star Valley. In general, survey respondents have a higher median age, median annual household income, and level of educational attainment compared to 2000 Census reports. Survey respondents also have lower household sizes and percentage of households with children under 18 compared to Census findings. The two groups did have a similar percentage of married respondents and similar labor status percentages. Length of residence is slightly more difficult to assess, although Census data suggests that approximately 60% of respondents may be long-term residents based on the length of time they have lived at the same property. This percentage is similar to Bear Lake respondent findings but higher than the percentage of long-term residents reported for Star Valley survey respondents.

Overall, comparative analysis suggest that survey results may be predisposed towards higher socioeconomic status respondents in the two study sites and may have underrepresented families and younger age categories, as well as women in the Bear Lake area and longer-term residents in Star Valley. The cause of this underrepresentation is most likely due to the greater time demands on younger, working families (leading to less free time availability to fill out a long survey) and the fact that the surveys were mailed using property tax information that was frequently addressed to the adult male member of the household.

Survey Frequency Distributions

Frequency distributions of survey questions relevant to this chapter are provided below. The majority of respondents found all values to be either "important" or "very important" to their reasons for purchasing property in Bear Lake or Star Valley (Table 15), although social-based values, such as having lived in the area all one's life, had a higher percentage of respondents choosing "not at all" or only "slightly important."

Respondents have a high level of attachment to Bear Lake or Star Valley and are satisfied with current community conditions, although one-third of respondents are less satisfied with their community compared to five years ago (Tables 16-17).

Table 15. Frequency distribution of respondents' reasons for purchasing property.

	Not at all Important	Slightly Important	Important	Very Important
I've lived here all my life.	31.6	7.5	17.3	43.6
I grew up in the area, moved away, and wanted to come back.	27.9	5.0	18.6	48.6
I have friends and family that live in the area.	10.6	19.2	32.5	37.7
It's a good financial investment.	13.3	18.4	36.9	31.4
It's a good place to raise my kids.	16.4	6.6	24.6	52.3
I like the slow pace of life.	4.6	17.3	32.0	46.1
I moved for job related reasons.	36.8	5.2	23.0	35.1
I enjoy the recreational opportunities.	3.5	12.6	28.5	55.4
I enjoy the area's natural beauty.	1..9	1.2	23.1	73.8
I enjoy the area's rural atmosphere.	2.9	8.6	28.6	59.9
It's an affordable place to live.	8.0	23.3	37.9	30.8
It's a good place to get away from everyday life.	7.7	8.1	29.1	55.1

Table 16. Frequency distribution of respondents' level of place attachment.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am very attached to Bear Lake (or Star Valley).	2.2	3.4	14.5	37.6	42.2
I get more satisfaction out of being in Bear Lake (or Star Valley) than any other place.	3.0	10.0	23.4	36.0	27.6
No other place can compare to Bear Lake (or Star Valley).	5.6	15.7	27.0	30.6	21.1
Bear Lake (or Star Valley means a lot to me.	1.8	3.0	12.7	44.0	38.5

Table 17. Frequency distribution of respondents' level of community satisfaction.

	Not at all Satisfied	Slightly Satisfied	Satisfied	Very Satisfied
How satisfied are you with your Bear Lake (or Star Valley) community as a place to live?	2.4	9.2	52.7	35.7
	Less	**Equal**		**More**
Are you more, less or equally satisfied with your community compared to five years ago?	35.8	51.1		13.1

Respondents also expressed mixed attitudes regarding aspects of community change (Table 18). Overall, respondents supported agricultural preservation, the need for policies to manage growth, and two conflicting views regarding property rights: residents should not be able to develop private property in ways that would harm the community or environment, and citizens should have a right to develop property without regulatory control. Respondents were neutral with regards to the benefits of, or community capacity for, population growth and the availability of open space and disagreed that tourism was the only option for economic growth and that its benefits would outweigh the costs, as

Table 18. Frequency distribution of respondent attitudes towards aspects of community change.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I support agricultural preservation in my community.	1.6	2.4	19.1	41.4	35.6
The benefits of tourism outweigh the costs to our community.	17.3	33.1	30.2	15.3	4.0
There is plenty of open space still available in the community.	7.0	22.5	27.6	36.4	6.4
We could benefit if more people move into our community.	16.3	30.8	29.0	20.3	3.6
Private citizens should have the right to buy, sell, and develop land as they please without being restricted by regulations.	7.2	13.9	14.7	27.1	27.1
Our community cannot support additional population growth.[#]	5.6	19.6	30.8	37.0	7.0
Managing growth and development will do little to control the pace of change in our community.	17.4	43.1	18.4	18.2	3.0
Tourism development is our only means of improving the economic condition of our community.	18.1	44.6	20.1	14.1	3.0
Policies are needed to manage the rate of growth and development in our community.	2.6	6.8	13.1	47.7	29.8
Citizens should not have the right to develop private property in ways that may negatively impact our community or the surrounding environment.[#]	6.0	10.0	11.8	43.9	28.3

[#] Reverse coded from original survey wording

well as disagreed that managing growth would not control the pace of community change.

The majority of respondents' have a moderately high level of local readership and informal conversation about community affairs, but very few respondents have engaged in development-related activities, such as selling land to developers, providing financial

support, or building residential housing in Bear Lake or Star Valley (Tables 19 and 20). A chi-square test of development activity by residency status did not yield significant differences (p=0.574).

Univariate and Bivariate Results for Independent Variables

Summary statistics for the four independent variable indices used in analysis - place attachment, knowledge of community affairs, and nature- and social-based resident property values - are provided below (Table 21). A detailed description of key variables can be found on pages 64 to 69 in Chapter 3.

Table 19. Frequency distribution of respondents' level of community knowledge and informal interaction.

	Never	Rarely	Sometimes	Often	Very Often
How often do you read the articles you see written about your community affairs and politics in local newspapers, newsletters, or other printed material?	2.4	7.3	20.7	40.2	29.4
How often do you talk about community affairs and politics with family, friends, and/or neighbors?	3.4	12.6	26.1	38.3	19.6

Table 20. Percentage of respondents engaging in development-related activities.

	Development-Related Involvement
Sold land to developers or land investment companies	5.4
Provided financial support for development-related activities	8.5
Built subdivisions or other residential housing units	5.6
Provided any other services to support development	8.1

Respondent place attachment scores ranged from 4 to 20 with a median value of 16.0, indicating moderately high levels of attachment among all residents. A comparison of place attachment scores by residency status using one-way ANOVA revealed significant between-group differences (Table 22); Tukey's HSD post hoc test suggests that non-residents have statistically lower attachment scores than permanent or seasonal residents. All ANOVA tables and post hoc results can be found in Appendix D2. Statistically significant results for this test and all further tests in this chapter are coded as following: † = $p<0.1$, ** = $p<0.05$, ***= $p<0.01$, and *** = $p<0.001$. As mentioned previously, due to unequal residency status group sizes, between group differences were originally tested using both ANOVA F and Welch's tests. Because results were consistent across tests, the choice was made to solely report ANOVA results in this dissertation.

Table 21. Summary statistics for independent variable indices.

	Place Attachment	Knowledge of Community Affairs	Nature-Based Values	Social-Based Values
N	495	506	378	65
Mean	15.5	7.5	17.1	12.6
Median	16.0	8.0	18.0	13.0
Std. Deviation	3.5	1.8	3.0	5.5
Skewness	-0.7	-0.6	-1.3	-0.1
Range	4-20	2-10	5-20	5-20

Table 22. Place attachment scores based on residency status.

Variable		Statistic	Permanent	Seasonal	Non-resident	
Place attachment	***	Mean	16.0	15.6	12.6	***
		S.D.	3.6	3.1	3.9	
		N	226	220	48	

Respondents overall also have a moderately high level of knowledge about community affairs, with a median value of 8.0 classifying respondents as reading and talking about community affairs "often." One-way ANOVA results suggest that there are significant between-group differences based on residency status (Table 23); Dunnett's C post hoc test found that permanent residents have statistically higher levels of knowledge than seasonal and non-residents and that seasonal residents have statistically higher levels of knowledge than non-residents.

With a median value of 13.0, social-based reasons for property ownership are important to respondents, although many respondents felt that these items were not applicable to their lives. With a median value of 18.0, the nature index is heavily skewed to the right and is very important to residents. Although not a scaled variable, with a median value of 3.0, respondents also found financial-based reasons for owning property to be important. One-way ANOVAs were run to test for between-group differences in ownership values based on residency status; all indices were significant (Table 24). Dunnett's C post hoc tests showed that permanent residents had statistically higher levels of agreement regarding the importance of social benefits of ownership relative to seasonal or non-residents, while seasonal residents had higher levels of agreement with the importance of nature-based benefits of ownership relative to permanent residents.

Table 23. ANOVA results for community knowledge scores by residency status.

Variable		**Statistic**	**Permanent**		**Seasonal**		**Non-resident**	
Community Knowledge	***	Mean	8.0	*	7.2	*	5.9	*
		S.D.	1.6		1.8		2.2	
		N	231		226		49	

Table 24. ANOVA results for ownership value scores by residency status.

Variable		Statistic	Permanent		Seasonal		Non-resident	
Nature-based Values	**	Mean	16.6		17.6	*	16.4	
		S.D.	3.3		2.4		3.8	
		N	167		175		36	
Social-based Values	***	Mean	15.6	*	7.2		6.9	
		S.D.	4.1		3.0		2.0	
		N	42		16		7	
Financial-based Values	**	Mean	2.8		2.9		3.4	*
		S.D.	1.1		1.0		0.8	
		N	176		184		46	

Non-residents had higher levels of agreement with the importance of financial-based benefits of ownership relative to permanent and seasonal residents.

Although permanent residents were currently less satisfied with their community relative to seasonal or non-residents (38% versus 36% and 21%, respectively) and engaged in growth machine activities at slightly higher rates compared to seasonal or non-residents (22% versus 18% and 11%, respectively), chi-square tests (2.76, p=0.252 for satisfaction and 3.288, p=0.193 for growth machine) did not reveal statistically significant differences based on residency status.

Univariate and Bivariate Results for Dependent Variables

Table 25 provides a summary of univariate measures of central tendency for the four attitude indices. With a median value of 11.5, residents are neutral about community capacity for population growth, the benefits of tourism growth, and open space availability. With median values of 12.0 and 5.0, respectively, residents slightly agree that growth control policies are necessary and slightly disagree that there are limited

Table 25. Summary statistics for community change attitude indices.

Statistic	Agriculture Preservation	Limited Options	Control over Development	Capacity to Grow
N	503	499	495	480
Mean	4.1	4.9	11.4	11.5
Median	4.0	5.0	12.0	11.5
Std. Deviation	0.9	1.6	2.5	3.2
Skewness	-0.9	0.4	-0.6	0.1
Range	1-5	2-10	3-15	4-20

options for community growth outcomes. With a median value of 4.0, residents support agricultural land preservation.

The four attitude indices were analyzed by one-way ANOVA for between-group differences based on residency status; the only significant difference was for community capacity for growth attitudes (Table 26). Non-residents had higher levels of support for population growth and tourism relative to seasonal residents, based on Tukey's HSD post hoc test.

Respondents were also given the ability to prioritize funding for a set of six different community objectives, assuming there were only finite resources on hand to address local issues and concerns. Overall, respondents apportioned the most tax revenue to providing adequate community services, followed by improving the economy, maintaining ranching and agricultural production, and keeping a small-town feel. Controlling where and how seasonal and permanent homes are developed were the lowest two scored goals (Table 27).

Table 26. ANOVA results for resident attitudes based on residency status.

Variable		Statistic	Permanent	Seasonal	Non-resident	
Agriculture Preservation		Mean	4.1	4.1	4.0	
		S.D.	0.9	0.8	1.0	
		N	231	220	51	
Limited Options		Mean	4.8	4.9	4.9	
		S.D.	1.6	1.7	1.7	
		N	228	219	51	
Control Over Development		Mean	11.2	11.5	11.4	
		S.D.	2.7	2.3	2.2	
		N	228	215	51	
Capacity to Grow	*	Mean	11.6	11.2	12.5	*
		S.D.	3.2	3.3	2.5	
		N	220	211	48	

Table 27. Summary statistics for community goal prioritization.

Statistic	Maintain Agriculture	Improve Economy	Small-Town Feel	Adequate Services	Permanent Homes	Seasonal Homes
N	467	466	467	471	467	467
Mean	15.9	17.6	13.6	28.4	12.2	13.4
Std. Deviation	17.7	17.4	13.9	24.0	10.9	14.6
Skewness	1.8	1.9	1.8	1.4	1.2	2.6
Range	0-100	0-100	0-100	0-100	0-50	0-100

Exploration of prioritization differences by residency status using one-way ANOVA revealed several between-group differences based on their ranking of agricultural preservation, economic condition, and control over seasonal home development (Table 28). Although Dunnett's C post-hoc test found no significant residency status differences for support of agriculture preservation or improving economic condition, seasonal residents apportioned higher tax amounts for control of seasonal home development relative to both permanent and non-residents.

Table 28. ANOVA results for goal prioritization by residency status.

Variable		Statistic	Permanent	Seasonal		Non-resident
Maintain Agriculture	†	Mean	17.9	13.8		16.2
		S.D.	20.0	15.6		13.3
		N	215	204		47
Improve Economic Condition	*	Mean	19.3	15.3		19.6
		S.D.	19.0	16.4		11.7
		N	213	205		47
Maintain Small-Town Feel		Mean	13.9	13.2		13.8
		S.D.	14.1	14.5		10.2
		N	214	205		47
Provide Adequate Community Services		Mean	28.7	28.4		26.8
		S.D.	24.7	24.9		15.7
		N	214	209		47
Guide Permanent Home Development		Mean	12.0	13.9		11.2
		S.D.	22.2	12.0		7.6
		N	214	205		47
Guide Seasonal Home Development	*	Mean	10.4	16.9	*	11.2
		S.D.	11.0	17.7		10.1
		N	214	205		47

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

A bivariate correlation matrix is provided in Appendix D to demonstrate zero-order relationships among key attitudinal variables.

Multivariate Analysis of Resident Attitudes

OLS regressions were run to estimate coefficients for models predicting residents' attitudes regarding community capacity for growth, control of development, agriculture preservation, and options for economic growth and community outcomes. Residential

residency status (coded as dummy variables with permanent residents as the reference category) was the primary independent variable, with control variables of age, education (1=college or more, 0=other), gender (1=female, 0=male), religious affiliation (1=LDS, 0=other), childhood community (1=rural, 0=urban), length of residence (1=long-term resident, 0=short-term), and county status (1=Bear Lake Valley, 0=Star Valley). The models also included development activity (1=yes, 0=no), knowledge about community affairs, place attachment, change in satisfaction level (0=equal or more satisfied, 1=less satisfied), and financial and nature-based values for ownership.

The results of the four regression models are provided in Table 29. Results are discussed using the standardized coefficient (B), which shows the relationship between independent and dependent variables after accounting for differences in measurement. Unstandardized coefficients and standard error results are excluded for ease of comparison between models, but are available in Appendix D. Significant variables are bolded and asterisked based on the level of significance.

Compared with permanent residents, residency status is neither a significant individual predictor nor significant block predictor for three of the four community change attitudes, after controlling for all other variables. Seasonal residents were, however, less likely to agree that their community can support additional growth relative to permanent residents. Individual significance was supported by a comparison of a full model to a model with the dummy set removed (F change 2.753, p=0.066). Resident perceived community capacity for growth is also predicted by community satisfaction, length of residence, and financial-based values for ownership. Decreased community

satisfaction is the strongest predictor of respondent attitudes towards population growth; respondents who are less satisfied with their community relative to five years ago

Table 29. Regression models for predictors of attitudes towards community change.

	Capacity for Growth	**Control over Development**	**Limited Options**	**Agriculture Preservation**
Long-term residents	**-.116***	.017	.108	.101
Bear Lake Valley	-.035	**.155***	.070	-.085
Knowledgeable about community	.001	**.186***	**-.132***	.051
Development activity	.047	-.105	-.012	**-.126†**
Female	-.079	.001	-.029	.071
Associates Degree +	-.041	.105	-.007	-.013
LDS	.111	.060	.018	-.035
Rural childhood community	-.101	-.002	-.032	.047
Age	.016	-.099	-.039	.069
Nature-based values	-.077	.097	**-.302*****	**.304*****
Financial-based values	**.194****	-.083	**.253****	-.028
Place attachment	.033	-.100	.020	**.132†**
Decreased satisfaction over time	**-.405*****	.090	**-.127†**	.105
Seasonal residents	**-.143***	.088	-.065	.021
Non-residents	.040	-.020	.007	-.083
Constant	13.012	9.314	7.405	1.325
N	211	211	211	210
ANOVA F test	5.456***	1.860*	2.753***	3.149***
Adj. R^2	0.250	0.059	0.113	0.135

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

experienced a 0.405 decrease in support for population growth compared to residents who are equally or more satisfied with their community. Residents who have owned

property for ten years or more also had a 0.116 decrease support for population growth, while respondents with stronger financial-based reasons for property ownership experienced a 0.194 increase in support for growth in their community.

Statistically significant predictors of respondent attitudes towards development control included study site and knowledge about community affairs. Knowledge about community affairs was the strongest predictor of support for control over development, yielding a 0.186 increase in support for growth control policies and regulation. Owning property in Bear Lake also increased support for development controls by 0.155.

Decreased community satisfaction, knowledge about community affairs, nature-based values, and financial-based values for ownership were all significant predictors of attitudes towards the availability of options for economic growth and control over community change. Respondents' level of nature-based values for property ownership was the strongest predictor of resident limited options attitudes; a one standard deviation increase yielded a 0.302 decrease in support for the notion that communities had limited options for economic development and community outcomes. A one standard deviation increase in knowledge about community affairs also decreased resident perception of limited options by 0.132, as did diminished respondent satisfaction with their community (0.127). Respondents with stronger financial-based values for ownership, in contrast, had a 0.253 increase in support for the notion of limited economic options and control over community outcomes.

Statistically significant predictors of agricultural preservation attitudes included respondents' development activity, nature-based values for property ownership, and place attachment. Respondents' level of nature-based values was the strongest predictor of

support for agricultural preservation; a one standard deviation increase led to a 0.304 increase in support for agricultural preservation. Similarly, a one standard deviation increase in place attachment led to a 0.132 increase in support. Respondents who had previous development activity, however, had a 0.126 decrease in support for preservation efforts.

While all four models were statistically significant based on ANOVA F tests, they had variable predictive power. The model for community capacity for growth had moderate predictive power, explaining roughly 25% of the variability in attitudinal support. Models for attitudes towards control over development, limited options, and agricultural preservation exhibited relatively low predictive power, however, explaining approximately 6 to 14 percent of the variability for the three dependent variables. Although the explanatory power was not ideal, because the variables included for analysis were based on theory, no additional model specification efforts were undertaken in an effort to influence R-squared results.

Interview Findings

Key informant and property owner interviews of Bear Lake and Star Valley residents were conducted to provide an assessment of residents' attitudes in response to community change. In addition, respondents to the mail survey were also given the chance to list their perceived critical issues facing their valley in an open-ended question format. Although numerous key issues and community change attitudes were identified, no clear distinction based on residency status emerged from the data.

Star Valley and Bear Lake residents both expressed general concerns about the need to manage growth and development in their communities, as well as more specific concerns about the loss of agricultural lands and open space; the need for effective long-term land use planning, zoning, and infrastructure to manage the population influx; and a sense that growth was occurring too quickly and at too high a density, especially for new subdivisions catering to single-family homes and out-of-town residents. Respondents also expressed an associated concern about increasing property values and taxes in light of the recent growth. Several issues were also brought up by Bear Lake respondents that were not discussed by Star Valley residents. Bear Lake respondents were much more concerned over the need to manage growth on a regional basis,[8] the likelihood of growth occurring without community involvement, how to manage the aesthetics of growth, and who should pay for the cost increases from growth. As one respondent said, "Developers are developing the land, roads, sewer, and water. They should pay - not put it on the county." Bear Lake respondents were similarly more concerned about the impacts of "outsider-based development," in which out-of-state companies with no personal ties to the area were profiting at the expense of local landowners.

Community services were another common concern, ranging from the need for improved water sources and supply, sewer systems, road maintenance, power and trash service, and greater access and increased competition for medical services, restaurants, grocery stores, and banking. Other service concerns included improved pedestrian crossways, parking, and alternative travel routes, e.g., paved trails, as well as expanding

[8] There is a recent push in Bear Lake to manage shared, inter-state resource issues, such as lake water quality or quantity, through larger-scale planning efforts as opposed to being managed within individual county or state jurisdictions.

and finding funding for fire and police services, developing new recreation opportunities, and managing increased traffic loads on roads. As one respondent stated, "the commute is difficult as my job is in Jackson. As more building continues and families move to the area, the traffic is becoming more and more busy in the canyon." A subset of both permanent and seasonal respondents expressed concerns over the lack of services to support the second-home communities and (in Bear Lake County) the need for a county building code and required building inspection.

Economic concerns included a desire to encourage a greater range of jobs at better pay, especially providing employment for young people, a lack of affordable housing, declining agricultural economy, loss of downtown businesses, rising prices and the infrastructure costs of growth, concern over the lack of a sufficient labor force, and the need for diversification, e.g., "developing a broader industry base to keep families here and considering functions that would attract tourists."

Quality of life concerns among residents included fears of overcrowding, loss of air quality, noise pollution, access to public lands, increased population and traffic, littering, diminished open space, lack of entertainment options for teens and adults, and concern over loose dogs and uncontrolled dirt bikes and personal watercraft use. The diminished value of agriculture in both Bear Lake and Star Valley was a concern for some respondents; as one individual stated, "It is becoming more difficult to ranch because of more non agriculture-minded people." The aging population of residents was also a concern in Bear Lake Valley, as was the need to maintain good school districts and increase the number of school-age kids. Increasing population and tourism development also led to concerns in both valleys over an increase in crime, drug use, and loss of a

small-town feel. Similarly, some respondents expressed concerns over a loss of social cohesion due to increasingly different family and personal values.

While Star Valley respondents generally mentioned the need to protect environmental resources and water quality as part of larger quality of life concerns, Bear Lake respondents were much more likely to discuss the topic in greater detail. Bear Lake respondents were highly concerned about maintaining lake water levels, quality, and overall aesthetics, as well as managing the use of, and access to, the lake and beach. Respondents also stated related concerns over stream and watershed degradation and pollution, particularly from increased density of septic tanks, the impact of summer home development in big game winter ranges, encroaching beach vegetation, and, in general, maintaining the natural beauty of the area.

Respondents in both study areas addressed a few issues regarding valley politics, including the need for good leadership, concerns over lack of county government support for seasonal homeowners and lack of seasonal representation, the state of county finances, the willingness, or lack thereof, of local leaders to allow growth, the domination of city office positions by local developers, the future of Star Valley Ranch following its incorporation as a town and impact to community members, as well as general concerns over excessive regulations concerning recreational activities such as campfires, fireworks, and all-terrain vehicles.

When asked to discuss their feelings about growth in their valley, interviewees generally express mixed opinions, regardless of residency status. The following comparative discussion of permanent and seasonal resident attitudes towards aspects of community change must be regarded with an element of caution, however, since

differences that emerged in interviews may have been influenced by different sampling approaches (purposive versus random).

Permanent Star Valley interviewees were more likely to be okay with growth than the other three subgroups, particularly if it improved local services. Respondents still expressed concerns, however, that growth be controlled and managed so that it did not impact their lifestyles too negatively.

> I think that growth is fine. Every community has to grow, but they're wedging in houses close to each other. We went from 10 acre to 5 acre to 0.5 acre subdivisions and I think that's kinda awful. [Thayne, WY female permanent resident]

> We do need some growth in the valley, it just needs to be done in a controlled fashion, so we're not Jackson and we still have what we moved up here for. I like the area to feel like a recreational area. But I don't mind not having some growth come in, some stores and stuff. [Freedom, WY male permanent resident]

Seasonal Star Valley interviewees were more likely than their permanent counterparts to state a desire for minimal future growth. Respondents typically followed up such statements with awareness, however, that growth would continue to occur in their valley and that controls were necessary to maintain their quality of life, particularly with regards to managing overdevelopment, overcrowding, and loss of natural aspects of the area.

> We hope not a lot more, but we know it will expand. Jackson is getting a lot more people and the influx is headed south. I hope it doesn't get too overpopulated. We like the mountains, the trees, and the rivers. [Haines City, FL male seasonal resident]

> I would like is to stay as it is, but I know growth will happen. By the time we build, there will be growth around us. I just want to see whoever be in charge that they make people stick to the laws and that the covenants keep [people] from "trashing it out." That would be… one thing to keep any eye out for and not overdevelop it so it's like living in a city. [Rydal, GA male seasonal resident]

> Well, I just think we need to be careful about growth. I moved to St. George 20 years ago from southern California. I don't want to see Star Valley do that [grow like southern California or St. George]. It would spoil the feeling I like in a community. I don't want wall to wall people, congestion, and long lines. I don't want to lose that rural feeling. [St. George, UT male seasonal resident]

Bear Lake seasonal interviewees were similarly concerned about threats to their quality of life in the face of additional growth but were more likely to express their concerns in terms of specific changes impacting their experiences in the area, relative to the more general concerns expressed by Star Valley respondents. Bear Lake seasonal respondents also expressed slightly more negative views overall about the impacts of change, relative to Star Valley seasonal interviewees.

> I guess it's called progress. My father said that there'd come a time when the people who have lived here won't have access to the lake, like Lake Tahoe, and it is that way now. It's too overdeveloped and getting worse. I don't like the look of the houses on the hillside. [Bountiful, UT female seasonal resident]

> I think that growth in the area has fostered a lot of traffic and a lot of noise, and that detracts from the quiet peaceful area it used to be. We've been going there since the 1960s and over time the development has caused increased traffic and that has been a problem. Right now with the speed limits and the way people don't follow the limits you can hear a vehicle from a half mile away. The other thing, the state and county have put together rules and regulations for the beach, but have no enforcement; it's a hollow effort to pass laws with no one to enforce them. The vehicles and 4-wheelers run rampant. [Craig, CO male seasonal resident]

Permanent Bear Lake interviewees provided the most variable views on community change among the four subgroups. Respondents were often split on the benefits or costs of growth. While respondents recognized that growth could provide important financial benefits, they were also highly concerned over community-level changes, in particular the increased demand for services by seasonal residents, loss of local families, social cohesion, uniqueness of the valley, and impact to agricultural

production in the area. The attitude split was well recognized by interviewees and often remarked upon, particularly with regards to fears by more pro-growth oriented respondents that specific governmental groups and older, long-term residents within the valley would oppose change and opportunities for economic development, thereby limiting the valley's future.

> Most old people are resigned to it. Us baby boomers want to be NIMBYs, but accept it grudgingly and want development to occur in an orderly fashion… The younger people support it. They don't know what it was like before. [Garden City male permanent resident]

> Tourism is a good deal, it gives summer income for local families… but summer homes, it's hard to meet their need for services. In Bear Lake West, seasonal residents expect quite a bit. We had a development that wanted to build 120 homes and a shopping mall and other things, but they couldn't find the water to support it. And they're going to be a closed gate community. All they want from us is water and sewer; they don't want us in there. People want to see this area changed to be like the previous places they lived. They want different regulations than the ones we have. Most of our community is retired or a few farmers. What do we need with services? I'd rather see a block of 10 families than a whole lot of seasonal homes. [St. Charles male permanent resident]

> I think everyone realizes the need to push tourism and help our kids stay at home. And tourism is building other businesses. Our state tax revenue has increased 30% in the last 3 years. [Fish Haven female permanent resident]

> We're just a little quiet community and want to keep it that way. We approved a subdivision 10 years ago. Some residents were really angry, saying we didn't have enough water. But we needed that growth to keep our services. I said, "Do you want to have to go to Garden City to get mail? Look at Fish Haven now. Or lose our school?" So we grew. [Laketown male permanent resident]

Respondents generally did not bring up concerns over agricultural land loss as a byproduct of growth unless the topic was specifically brought up by the interviewer. Respondents were more likely to mention a desire to keep the area rural but did not clarify how they defined the term. Attitudes towards agricultural preservation, when asked, were somewhat ambivalent; loss of agricultural lands was not perceived as a

critical concern relative to other issues, particularly for areas like Garden City where loss of agricultural lands was felt to have already occurred. Agricultural representatives, however, were much more likely to voice support for agricultural preservation.

> I think the older local people feel put upon, but it's not a major issue in Garden City. It's less a sense of losing agriculture than losing their sense of community. [Garden City male permanent resident]
>
> I think there's mixed feelings over the loss of agriculture for development. I'm personally grateful for the agriculture land. [Montpelier female permanent resident]
>
> I'd say more people are more interested in money than in the agriculture loss… I'm concerned people see money signs and lose their community. You can't get some of that open space back. [Fish Haven male permanent resident]
>
> The push in land costs hasn't come to Laketown yet. But once it's gone out of agriculture you're not going to get it back. Garden City doesn't have much left. Most of the land doesn't qualify for greenbelt anymore. And the residents that have been there hate it. I know one who's talking of moving to Woodruff. [Laketown male permanent resident]

During the interviews, an effort was made to assess whether people felt that their views differed from those of people in other residency status groups, for example, by asking seasonal residents if they felt their views were shared by permanent residents. Responses varied widely across interviewees. When permanent Star Valley and Bear Lake residents were asked about seasonal residents' attitudes towards growth, respondents were often cautious to express an opinion, but when pressed felt that they were more likely to not want additional growth in the valley. As one respondent said, "everyone wants to be the last person to move to Star Valley." In general, when seasonal residents were asked about permanent residents' attitudes towards growth, half believed that they didn't like the growth while the other half believed that permanent residents

were okay with growth, particularly if they could financially benefit from it. Examples of both perspectives from interviews include:

> They don't like the growth. Some have benefited financially. Since the settlers, Star Valley has had large farms, and as the land becomes valuable, people are able to make quite a bit of money selling land. So it's a mixed feeling, but overall the population doesn't like the growth. [Star Valley male seasonal respondent from St. George, UT]

> I think a good portion are profiting off of the new homeowners. So I think they generally like growth, especially the local businesses. [Bear Lake female seasonal respondent from Salt Lake City, UT]

Discussion

Based on preview research, it was expected that this study would find that land-use attitudes would differ based on residency status, but the nature of those differences would vary depending on the type of change that has occurred. This hypothesis was not supported. Residency status differences were not associated with differences in either support for agricultural preservation or control over residential development. Overall, respondents indicate relatively strong support for agricultural preservation; support is, however, higher for those with higher values for nature-based aspects of property ownership and higher levels of attachment to their communities. Respondents hoping to benefit economically from growth, however, have lower levels of support for preservation efforts.

These results make sense in light of how rural communities are changing from an agricultural to residential landscape. Respondents with the highest levels of place attachment are most likely to be permanent, long-term residents who potentially remember the valley as an agricultural community prior to extensive residential

development and/or are residents with a rural childhood background who may have a sentimental value for the presence of agriculture in rural communities (individual t-test results supporting these relationships are provided in Appendix D2). While nature-based values for property ownership include a range of themes, a shared desire for rurality, natural beauty, and escapism are more likely to be maintained through the preservation of agricultural land uses than alternative development activities. For respondents seeking to benefit economically from growth, however, agricultural land preservation prevents the pursuit of alternative land uses, such as residential housing development, and therefore may be perceived as a less desirable community outcome.

Although included as a critical issue by respondents to an open-ended question in the mail survey, concern over loss of agricultural land was generally not a frequent topic brought up in interview sessions. When asked specifically about loss of agricultural land, many respondents expressed more ambivalent opinions relative to those suggested by survey results. Although caution is warranted, based on small sample sizes, in assuming that interview responses capture the full range of resident attitudes and beliefs about agricultural preservation, this difference between qualitative and quantitative findings highlights one of the challenges of using general survey statements to assess residents' attitudes. General attitudinal statements do not require respondents to think about context or possible real life constraints that might influence their opinions when confronted personally with the issue. Consequently, general attitude assessments may yield inflated response scores based on a desire by respondents to provide answers that are emotionally appealing (similar to contingent value studies where willingness to pay is typically greater in the abstract than in reality, e.g. Ajzen et al. 2004).

In a follow-up survey question requiring prioritization of issues based on limited funding, maintaining agricultural production, and therefore indirectly promoting the preservation of agricultural lands, was the third-highest ranked community goal for all residents after providing adequate community services and improving the local economy. While permanent and non-residents' specific rankings matched overall findings, seasonal residents ranked agricultural preservation even lower at fifth overall. These rankings suggest a middle ground between qualitative and quantitative agricultural preservation attitude findings. While overall support for agricultural preservation may be high, when put into context relative to other community issues, loss of such lands is not the primary (but also not the lowest) focus of concern for residents with regards to community change.

Resident attitudes towards the second aspect of land use change, e.g., the shift towards increasing permanent and seasonal residential development, were addressed by asking respondents about the need for developmental control measures. Respondents who had higher levels of knowledge about community affairs, as well as Bear Lake residents in general, had greater support for growth control policies and regulations. Because Star Valley has been experiencing amenity growth-related development for a longer period of time than Bear Lake Valley, residents in the latter community may feel less well adjusted to change, or less capable of managing it, thus explaining the valley's higher levels of support for growth control. Given that knowledge about community affairs is positively correlated (0.4) with overall place attachment, higher levels should indicate a greater awareness of the recent changes occurring to local communities and signify a stronger desire to protect aspects of the community that are important to

residents' sense of place, such as its small-town feel. It's worth noting, though, that while respondents expressed overall support for growth control measures, residents ranked the management of seasonal and permanent resident housing development as their lowest two goals, assuming limited community resources. Seasonal residents were the exception to this rule, ranking control of seasonal home development second and control over permanent home development fourth, overall. These ranking results suggest that, similar to agricultural preservation, community change aspects influencing the *landscape* of rural communities are generally less important to residents than other dimensions of change.

The second hypothesis that there will be residency status-based differences in resident attitudes towards opportunities for economic development, but not population growth, was not supported. Respondent attitudes towards economic development options did not differ by residency status, but seasonal residents had lower levels of support for population growth relative to permanent residents. Both attitudes, however, were more strongly influenced by non-residency status variables such as location, knowledge of community affairs, decreased community satisfaction, and financial-based values for property ownership. Long-term residents and residents with decreased community satisfaction levels were less likely to believe that the community was capable of accommodating additional growth, while residents with a financial-based motivation for property ownership were more likely to support growth. Similarly, respondents with higher financial-based property values expressed higher support for the notion of limited economic and community options, while respondents who were more knowledgeable

about community affairs, had higher nature-based values for property ownership, or were experiencing decreased community satisfaction had lower "limited options" support.

Intuitively, respondents able to benefit from additional development should be more likely to welcome population growth, while residents who have lived in the community prior to recent development, such as long-time residents or those who are less satisfied with their community after recent development activity, should be more likely to value aspects of their community that are not as compatible with additional population growth. These results are in keeping with the previously discussed findings for resident agricultural preservation attitudes.

With regards to the notion of limited economic options, residents with higher levels of community knowledge are more likely to care strongly about community outcomes (with knowledge positively correlated to place attachment) and therefore have the awareness to understand, and potentially act upon, community changes, leading to lower limited options attitudes. The association between higher levels of nature-based values and lower scores on the limited options scale is most likely due to such residents' higher levels of resource capacity (e.g., annual income, education level), which serves as an indicator of their capacity to influence community decisions and outcomes (Verba et al. 1995). Residents' dissatisfaction with their community may also act as an incentive or stimulus for action in response to community change, rather than leading to apathy or out-migration[9]. In contrast, respondents who have financial-based motivations for property ownership (typically highest in non-residents) may be more willing to accept the

[9] Residents with higher levels of community dissatisfaction are more likely to leave the community and take fewer actions in response to change (discussed in Chapter 7). For dissatisfied residents not expecting to move, however, the total number of actions selected in response to hypothetical scenarios was slightly higher than that of residents currently satisfied with community conditions.

possibility of limited community outcomes due to their lower levels of interaction and attachment to their Star Valley or Bear Lake community.

In qualitative findings, respondent attitudes towards population growth and tourism/economic development were mixed; interviewees typically recognized the benefits and cons of population growth and a tourism-based economy. As with survey results, respondents were more likely to support such growth if they believed that they as individuals, or the valley overall, could benefit from population expansion. Although no clear residency status-based attitude differences could be identified from interviews, efforts to identify differences in how residency status groups perceived "other group" attitudes towards population and economic growth were more fruitful. While interviewees were generally able to capture at least some aspects of "other" residency status groups views, they generally underestimated the variability of attitudes expressed, leading to a less nuanced categorization of "other" group opinions than the actual muddy waters that exist in rural communities. This underestimation was consistent across all residency status categories, regardless which "other" group was being remarked upon.

Providing adequate community services and improving economic conditions were, however, the highest ranked community goals given finite resources (although economic condition was ranked third overall for seasonal residents). These ranking suggest that community change aspects influencing the *function and economic growth* of rural communities are generally more important to residents than other dimensions of change.

The third research hypothesis that community change attitudes will be more strongly predicted by aspects of place attachment, community satisfaction, or other non-

residency status variables than by socio-demographic or residency status variables was supported. Although previous studies of residency status and socio-demographic influences on resident attitudes have yielded mixed results (e.g., Clendenning et al. 2005, Krannich and Albrecht 1995, McBeth and Foster 1994), this study found that socio-demographic variables were not significant predictors for any of the resident attitudes while residency status was only significant for a single model assessing residents' perceived community capacity for growth.

In sum, the results presented in this chapter are compatible with the burgeoning literature on seasonal versus permanent resident and long-term versus newcomer resident attitudinal studies found in the literature (e.g., Clendenning 2004, Connelly and Brown 2001, Jobes 1995, Marcouiller et al. 1996, Sofranko and Williams 1980, Wellman and Marans 1983). While residents do express subtle attitudinal differences based on residency status, residency status is not an important predictor with regards to resident attitudes towards land use change, agricultural preservation, and opportunities for economic development. Non-residency status variables explain a greater amount of variability in respondent attitudes, although the low R-squares for models other than population growth suggest that additional variables may need to be identified in future studies, such as more specific economic, quality of life, or environmental issues indicated in qualitative findings.

Given the degree of shared attitudes expressed across tenure categories in this study, resident conflict over community goals should be minimal. But community leaders should still be wary, since general community attitudes fail to address differences in issue prioritization by groups or the specifics of how to direct growth. Given the wide

range of key issues identified by respondents, as well as some tenure group differences in community issue prioritization, common sense suggests that there is a greater likelihood of conflict emerging from specific management decisions and implementation of growth management policies than from widespread differences in overall values and attitudes. Admittedly, this study barely scratches the surface of tenure group attitude differences in terms of what is deemed an acceptable trade-off or resident reactions to specific issues or management plans. Respondents may respond more strongly towards management changes that impact the perceived function and economic condition of their communities relative to those changes that influence the visual landscape, which helps explain why one Bear Lake key informant stated that public meetings regarding proposed developments had the lowest attendance rate. It should be recognized, though, that seasonal residents ranked the issue of seasonal residential development much higher than permanent or non-residents. Their limited ability to attend meetings due to time and space considerations, however, may lead leaders to assume that public silence equates to acceptance of the status quo and/or that the issue is of low concern to all residents.

Overall, these findings suggest that a different tack is needed in rural community attitudinal studies. Researchers need to move beyond general attitudinal assessments to a more nuanced understanding of resident attitudes when faced with choosing among multiple, competing issues and actions. Incorporating additional approaches, such as willingness to pay studies or game theory, into survey designs may provide additional information to researchers and local community leaders seeking to understand issue-specific controversy by highlighting the acceptability of specific trade-offs among residents. Additionally, given the limited role of residency status and socio-demographic

characteristics in predicting attitudes towards aspects of community change, researchers may need to reevaluate the usefulness of such classification efforts with regards to identifying resident value and attitude differences.

Attitude studies can provide several important tools for local community leaders. They can highlight residents' issues and concerns, identify potential for resident conflict over management goals, and serve as a starting point for public involvement activities. In particular, leaders can use the presence of a shared attitudinal basis to help bring seasonal, permanent, and non-residents to the table for collaboration and decision-making efforts and to overcome potential misperceptions or underestimation of "other group" perspectives. General attitude studies do have one key weakness that must be recognized by leaders, however. General community attitudes often fail to address differences in issue prioritization by groups or the specifics of how to direct growth. Consequently, leaders employing attitudinal studies need to be clear on their purpose and knowledge outcomes, so that survey efforts provide results that are relevant to the desired scale of management.

CHAPTER 5

FACTORS INFLUENCING RESIDENT PARTICIPATION IN COMMUNITY AFFAIRS

Introduction

Resident participation in rural community affairs has received little attention in the sociological literature, particularly with regards to how different residency status individuals respond to amenity growth-related change. When studied, seasonal residents are often characterized as poorly integrated into local community decision-making processes, while newcomers are often portrayed as heavily resourced anti-growth activists (Eser and Luloff 2003, Green et al. 1996, Walker 2003). This chapter provides additional information regarding incentives and obstacles to participation for seasonal, permanent, and non-residents. In particular, the relationship between residents' political orientation, motivation, social networks, socio-demographics, place attachment, civic and socioeconomic resources, and intention to become involved in community affairs are explored.

Survey Findings

Survey-based frequency distributions and univariate, bivariate, and multivariate results exploring the relationship between key independent variables and behavioral intention are reported below. Readers are referred to pages 67-74 and 78-82 of Chapter 3 for discussion of analytic approaches and variable descriptions.

Frequency Distributions

Overall, respondents know most of their closest neighbors and have a moderate number of friends and family within an hour's drive of their property. Respondents also generally feel welcome in their communities, although they are more likely to disagree than agree that they have met most of the year-round, seasonal, or long-term residents, or leaders of their community (Tables 30 and 31). Roughly 64% of respondents have never been asked to serve in a leadership role in their community, while only 6% are often asked to serve (Table 32).

Table 30. Frequency distribution of respondents' social networks.

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
I know most of the long-term, established families in Bear Lake (or Star Valley).	30.0	20.9	17.5	22.1	9.5
Many of my friends, family, and/or relatives are business, church, or political leaders in Bear Lake (or Star Valley).	31.3	18.8	17.4	24.0	8.7
I've met most of the year-round residents in my Bear Lake (or Star Valley) community.	28.2	24.7	17.7	21.3	8.0
I've met most of the seasonal residents in my Bear Lake (or Star Valley) community.	29.8	33.0	21.5	11.3	4.4
The other residents make me feel welcome in my Bear Lake (or Star Valley) community.	5.6	4.2	25.6	50.8	13.7

Table 31. Frequency distribution of respondents' social ties.

	None	1-5	6-20 *(6-10)	21 or more
How many of your adult relatives live or own a home within an hour's drive from your property?	44.6	31.8	19.3	4.3
How many of your friends live or own a home within an hour's drive from your property?	23.4	26.8	32.2	17.6
Think of the 10 closest homes to your property. Of those neighbors, how many have you met?	7.9	31.2	60.8*	NA

Table 32. Frequency distribution of respondents' opportunities for leadership.

	Never	Rarely	Sometimes	Often
Have you ever been asked to serve in a leadership role in Bear Lake (or Star Valley)?	64.2	10.2	19.4	6.2

Respondents are generally not active or active in only a few community organizations, clubs, or civic groups. This trend is confirmed by respondents' degree of participation in different aspects of community life; overall, respondents participate most often in property-related activities (such as maintaining their property). Recreation is the second most common activity, while less than half of residents participate in informal or formal social activities on an "often" basis, and less than one-third of respondents often participate in political or economic activities (Tables 33 and 34).

Respondents generally agree that they have the ability to write an effective letter and take action in the face of opposing opinion. Respondents also agree, to a lesser extent, that their voice would be listened to if they spoke up at a meeting but are split as to whether they have the free time to participate in community affairs (Table 35).

Table 33. Frequency distribution of respondents' degree of organizational involvement.

	Organizational Involvement
No groups	47.4
One group	23.1
Two or more groups	29.4

Table 34. Frequency distribution of respondents' participation in aspects of community life.

	Never	Rarely	Sometimes	Often	Very Often
Property activities	5.6	3.6	10.2	34.3	46.2
Family activities	13.7	8.9	21.9	27.8	27.8
Informal social activities	8.0	12.9	32.8	32.2	14.1
Formal social activities	17.0	19.4	18.8	19.8	24.8
Political activities	24.8	24.0	23.6	16.5	11.1
Economic activities	29.1	23.7	28.1	14.0	5.1
Recreation activities	3.6	6.4	19.3	35.5	35.3

Table 35. Frequency distribution of respondents' civic resources, time availability, and voice.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
If I spoke up at a meeting, people would listen to what I had to say.	5.3	10.2	32.4	48.6	3.5
If I wanted to write a letter to a local official about an issue that concerned me, I could convey my point effectively.	1.8	3.7	16.4	59.7	18.4
I will take an action that I feel is right regardless of what others around me think.	1.4	3.5	14.0	56.9	24.2
I have the free time to participate in community affairs.	8.8	28.7	30.0	28.1	4.3

Respondents are motivated to take action by a combination of personal and external factors. The majority of respondents say they are likely or very likely to take action if they perceive that a proposed change would carry economic costs to them, but they are less likely to anticipate taking action if a change would produce personal economic benefit. Impact to family and friends, and benefits to the community or environment, also are likely to motivate participatory action (Table 36).

Respondents generally agree that citizens should be involved in community decisions. However, they are much more neutral in respect to their faith in government officials to make good decisions and listen to all perspectives, as well as in the opportunity to get involved in community affairs, and are relatively split as to whether their actions can influence community outcomes. There is not a strong sense of peer

Table 36. Frequency distribution of respondents' motivation to take action.

	Not at all likely to take action	**Somewhat likely to take action**	**Likely to take action**	**Very likely to take action**
The proposed change has a direct economic cost to me.	3.6	25.1	41.8	29.5
The proposed change has a direct economic benefit to me.	25.2	26.2	31.4	17.2
I would receive some non-economic benefit.	37.9	31.8	25.0	5.3
My family and friends will be affected by the change.	10.0	29.9	40.0	20.1
My community leaders tell me I should get involved.	21.0	37.1	32.6	9.4
My actions will benefit the community.	6.5	27.6	43.7	22.2
My actions will benefit the environment.	6.9	26.9	39.5	26.7

pressure or social norms to participate in community affairs, nor do residents believe that control over community outcomes is in the hands of external forces (Table 37).

Table 37. Frequency distribution of respondents' political orientation.

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
My personal actions can have a strong impact on community decisions and outcomes.	8.4	22.4	28.4	34.3	6.5
Local residents should play a large role in shaping community decisions and policies.	0.4	1.2	7.7	59.3	31.4
I have faith in our elected local officials to make good community decisions.	14.0	19.1	43.7	21.1	2.0
Community leaders will listen to and consider everyone's opinions before making community decisions.	15.3	23.1	40.6	18.6	2.4
There are plenty of opportunities for participation in my community.	4.1	11.5	34.4	42.9	7.2
Most of our community decisions are determined by external forces beyond the control of our local government.	4.9	38.0	35.3	18.8	3.1
Other members of the community expect me to participate in community affairs.	8.2	26.8	44.5	18.1	2.3
I trust my local political leaders to act in my best interest.	18.5	22.6	37.6	19.5	1.8

Univariate and Bivariate Results for Independent Variables

A summary of univariate statistics for independent variable indices is provided below (Table 38). With median values of 12.0 and 14.0, respectively, residents had neutral levels of trust in political leaders but slightly agreed with measures of personal efficacy. The variables were analyzed by one-way ANOVA for between group differences based on residency status, but no statistically significant differences were found (Table 39). All ANOVA tables and post hoc results can be found in Appendix D2. Statistically significant results for this test and all further tests in this chapter are coded as following: † = p<0.1, * = p<0.05, * = p<0.01, and *** p<0.001.

Table 38. Summary of univariate statistics for independent variables indices.

	Trust in Leaders	Personal Efficacy	Civic Resources	Personal Motivation	"Greater Good"	Local Social Connections
N	475	476	488	496	486	491
Mean	11.5	13.4	7.9	7.3	10.7	7.8
Median	12.0	14.0	8.0	7.0	11.0	8.0
Std. Deviation	3.4	2.5	1.9	2.2	2.9	3.6
Skewness	-0.3	-0.4	-0.9	0.1	-0.2	0.2
Range	4-20	4-20	2-10	3-12	4-16	3-15

Table 39. Political orientation differences by residency status.

Variable	Statistic	Permanent	Seasonal	Non-resident
Political Trust	Mean	11.6	11.5	10.9
	S.D.	3.4	3.4	3.4
	N	213	210	50
Personal Efficacy	Mean	13.6	13.3	13.2
	S.D.	2.5	2.4	2.9
	N	213	210	50

With a median value of 8.0, residents agreed with two statements assessing civic resource capacity, including an ability to write a letter to local officials that could convey their point effectively and an ability to take action regardless of others' opinions. A one-way ANOVA looking at civic resources and free time only found a slight significant residency status-based difference for free time to participate (Table 40). Tukey's HSD post hoc test did not yield any specific differences by residency status, however.

Residents were "somewhat likely" to "likely" to take action based on personal motivation and motivation based on the "greater good." With a median value of 7.0 versus 11.0, respondents were less likely to take action for personal reasons than for the greater good. The two variables were analyzed by one-way ANOVA for between-group differences; neither motivation was statistically different based on residency status (Table 41).

With a median value of 8.0, respondents slightly disagree that they have strong local social connections to other permanent, long-term, or politically connected residents in Bear Lake or Star Valley. An exploration of residency status influence on resident social connectedness revealed significant differences via one-way ANOVA (Table 42).

Table 40. Civic skills and free time differences by residency status.

Variable	Statistic	Permanent	Seasonal	Non-resident
Civic Skills	Mean	8.0	7.8	7.8
	S.D.	1.4	1.5	1.4
	N	221	218	52
Free Time †	Mean	3.0	2.8	2.7
	S.D.	1.0	1.0	1.1
	N	219	215	51

Table 41. Motivation differences by residency status.

Variable	Statistic	Permanent	Seasonal	Non-resident
Personal Motivation	Mean	7.4	7.2	7.2
	S.D.	2.2	2.3	2.2
	N	223	219	52
Greater Good	Mean	11.0	10.5	10.3
	S.D.	2.8	2.9	3.0
	N	218	216	50

Table 42. Social network differences by residency status.

Variable		Statistic	Permanent		Seasonal	Non-resident
Local Social Connections	***	Mean	9.7	***	6.3	5.1
		S.D.	3.3		3.1	2.5
		N	227		219	45

Compared to seasonal or non-residents, permanent residents are more likely to agree that they have strong local social connections (Tukey HSD test).

Cross tabulation results also found that permanent residents had a higher percentage (42% versus 30% and 30%) of recruitment for leadership positions in Bear Lake or Star Valley relative to seasonal and non-residents (chi-square = 7.881, $p<0.05$).

Univariate and Bivariate Results for Hypothetical Scenarios

A breakdown of respondents' choice of actions selected in response to ten hypothetical community changes constructed from earlier interviews is provided below (Table 43). Because respondents were given the choice of choosing more than one response per scenario, frequencies add up to more than 100%. Multiple actions were

Table 43. Frequency distribution of respondents' choice of action in response to community changes.

	Do Nothing	Talk About Issue	Contact Officials	Give Money	Attend Public Meeting	Form or Join Group
A new subdivision is proposed in your community.	9.5	47.7	32.8	6.6	40.1	10.9
Road traffic and noise worsen in your community due to additional summer tourists.	13.0	36.8	27.7	7.4	29.5	16.9
Your public land access is restricted by new hillside homeowners.	8.5	29.3	31.4	10.3	32.4	22.9
The community plans to close a middle school due to low student enrollment.	43.4	25.2	10.9	4.7	22.7	7.0
Residential development in the valley reduces the quality and quantity of existing water resources.	2.9	29.7	37.2	13.8	42.4	23.8
County commissioners propose bringing in an ethanol plant, which some residents fear may pose a health or safety risk.	7.2	29.1	31.6	10.9	46.9	20.2
Your property taxes increase to cover new sewer and water lines.	19.2	25.0	32.6	5.6	33.9	9.5
Construction of nearby homes reduces your views of the surrounding mountains or lake from your house.	21.5	28.9	27.5	5.2	23.6	13.2
Residential development in your community places a strain on existing police and ambulance services.	9.7	30.4	30.8	14.1	32.9	16.3
Community leaders propose a ban on further development in your area for the next five years.	33.5	25.4	23.4	10.1	28.9	12.6

most frequently selected (>30%) in response to a proposed new subdivision, ethanol plant, and degraded water resources.

When confronted with a potential middle school closure or a proposed ban on development, respondents were most likely to suggest they would not take any action. For all other scenarios, the most commonly selected actions were: talking with friends, family or neighbors; contacting local officials; and attending public meetings. The choice of attending public meetings, in particular, was most frequent when issues impacted the valley as a whole, such as a proposed ethanol plant or degraded water resources. Giving money to address the issue was the least common action selected, accounting for only 5-14% of all actions chosen across scenarios.

On average, respondents predicted that they would take an average total of 15 actions in response to the ten scenarios, although the total number of actions selected ranged from 2 to 47. One-way ANOVA did not reveal any significant residency status-based differences in total number of actions selected by respondents ($p = 0.202$). For specific scenarios and types of action, permanent residents chose more actions to address a school closure issue relative to seasonal and non-residents ($p<0.01$), and chose more public meeting actions across all scenarios ($p<0.1$). ANOVA results are provided in Appendix D. Summary statistics for the dependent participatory variables are provided in Tables 44 and 45.

External validation that respondents were acting rationally in regards to their choice of actions in hypothetical scenarios was explored by comparing respondents'

Table 44. Summary statistics for participatory dependent variables: overall and type of action.

Statistics	Overall Involvement	Talk About Issue	Contact Officials	Attend Public Meeting	Form or Join Group	Give Money
N	397	396	396	396	396	396
Mean	14.8	3.3	3.0	3.6	1.7	1.0
Median	9.0	3.0	3.0	3.0	1.0	0.0
Std. Deviation	9.8	2.5	2.3	2.6	1.9	1.3
Skewness	1.2	0.7	0.7	0.4	1.6	1.6
Range	2-47	0-10	0-10	0-10	0-10	0-6

Table 45. Summary statistics for participatory dependent variables: issue-specific intensity of action.

Statistics	Proposed Development	Water Degradation	School Closure	Development Ban
N	499	494	489	496
Mean	1.6	1.9	0.9	1.2
Median	1.0	1.0	1.0	1.0
Std. Deviation	1.3	1.6	1.2	1.4
Skewness	1.5	1.3	2.0	1.9
Range	0-6	0-6	0-6	0-6

overall intensity of involvement with a separate measure of participation in aspects of community life. Correlation analysis suggests a moderate (0.3) relationship between respondents' frequency of self-reported political or formal social action and overall tendency for involvement in community affairs, as well involvement in both public meetings and group-based activities.

A bivariate correlation matrix is provided in Appendix D to demonstrate zero-order relationships among key participation variables.

Multivariate Analyses of Resident Behavioral Intentions

OLS regressions were run to estimate coefficients for two models exploring measures of political orientation, socio-demographics, motivation, civic resources, place attachment, and social networks on residents' overall predicted involvement in community affairs and self-reported political involvement. Residency status (coded as dummy variables with permanent residents as the reference category) was the primary independent variable, with control variables of age, gender (1=female, 0=male), income (1=$60,000 or more, 0=less than $60,000), length of residence (1=long-term resident, 0=short-term), religious affiliation (1=LDS, 0=other), childhood community size (1=rural, 0=urban), and county status (1=Bear Lake Valley, 0=Star Valley). The model also included the variables of political trust, sense of efficacy, personal and "greater good" motivation indices, knowledge of community affairs, number of social ties, local social connections, place attachment, leadership recruitment (1= previously recruited, 0=never recruited), free time, and civic resource capacity.

The results of the two regression models are provided in Table 46. Results are discussed using the standardized coefficient (B), which shows the relationship between independent and dependent variables after accounting for differences in measurement. Significant variables are bolded and asterisked based on the level of significance.

Residency status is not a significant individual predictor of hypothetical community involvement after controlling for all other variables; nor is residency status a significant contributor to R-square when comparing a full model to a model with the

Table 46. OLS regression results for respondent involvement in community affairs.

	Hypothetical Involvement				**Self-Reported Involvement**			
	B	Std. Error	(B)		B	Std. Error	(B)	
(Constant)	-13.221	6.617			.009	.608		
Long-term resident	.659	1.255	.032		.180	.116	.068	
Bear Lake Valley	1.025	1.297	.050		.087	.120	.033	
Local social connections	.270	.203	.099		.047	.019	**.131**	*
Place attachment	1.251	.666	**.115**	†	.113	.060	**.082**	†
Knowledge of community affairs	.962	.365	**.166**	*	.232	.034	**.311**	***
Personal motivation	-.168	.317	-.037		-.020	.030	-.034	
Motivation for the greater good	.645	.278	**.177**	*	.018	.025	.038	
Personal efficacy	.594	.309	**.146**	†	-.004	.029	-.008	
Political trust	-.223	.186	-.076		-.016	.018	-.040	
Leadership recruitment	2.821	1.331	**.135**	*	-.131	.123	-.048	
Free time	.350	.612	.036		.025	.057	.019	
Civic skills	-.004	.430	.000		.054	.041	.057	
Age	-.049	.041	-.071		.001	.004	.011	
Female	1.609	1.233	.076		-.040	.114	-.015	
Income $60,000+	1.812	1.233	.085		.184	.114	.066	
LDS	1.080	1.246	.052		.114	.115	.043	
Rural childhood	-.284	1.202	-.014		.023	.115	.009	
Seasonal residents	1.371	1.484	.067		-1.026	.135	**-.386**	***
Non-residents	2.256	2.532	.058		-1.019	.222	**-.217**	***
N		277				347		
ANOVA F test		3.549***				15.701***		
Adj. R^2		0.149				0.447		

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

dummy set removed (F change 0.603, p=0.548). Respondents' level of place attachment, previous leadership recruitment, knowledge of community affairs, personal efficacy, and motivation based on the greater good are, however, all significant, positive predictors of

intention to become involved in community affairs. Altruistic motivation is the strongest predictor of intended community involvement; respondents who have higher perceived levels of motivation experienced a 0.177 increase in predicted involvement in community affairs. A one standard deviation increase in knowledge of community affairs increased involvement by 0.166, as did personal efficacy (.146), and place attachment (.115). Respondents who had previously been recruited for leadership positions in the Bear Lake or Star Valley area also had higher levels of predicted involvement (0.135). The model is significant with an adjusted R^2 of 0.149.

In comparison, residency status is a significant individual predictor of self-reported involvement in community political activity after controlling for all other variables; seasonal and non-residents were less likely to report involvement in political activities compared to permanent residents. Residency status remains a significant contributor when comparing a full model to a model with the dummy set removed (F change 30.551, $p<0.001$). Respondents' level of place attachment, local social connections, and knowledge of community affairs are all also significant, positive predictors of involvement in community affairs. Knowledge of community affairs is the strongest predictor of intended community involvement; respondents who have higher perceived levels of knowledge experienced a 0.311 increase in predicted involvement in community affairs. A one standard deviation increase in local social connections increased involvement by 0.131, as did place attachment (.082). The model is significant with an adjusted R^2 of 0.447.

OLS regressions were then run to compare overall hypothetical involvement coefficients to coefficients for action-specific models. The models were developed using

the same independent variables as previously described. Results are provided in Table 47 and discussed using the standardized coefficient (B). Unstandardized coefficients and standard error results are excluded for ease of comparison between models, but are available in Appendix D2.

Table 47. OLS regression results for predictors of time-based and social-based actions.

	Social-Based Actions				**Time-Based Actions**			
	Talk		Contact		Meeting		Group	
Long-term resident	.002		-.050		-.013		**.150**	*
Bear Lake Valley	.043		.081		.028		.046	
Local social connections	.069		.097		**.186**	*	.062	
Place attachment	**.167**	*	.050		.085		.037	
Knowledge of community affairs	.103		**.135**	*	**.139**	*	**.183**	**
Personal motivation	-.033		.026		-.028		-.047	
Motivation for the greater good	.117		**.195**	*	.120		**.132**	†
Personal efficacy	**.132**	†	.054		.110		**.203**	**
Political trust	.008		.034		-.076		**-.107**	†
Leadership recruitment	.078		**.143**	*	**.151**	*	.008	
Free time	-.041		.042		.077		.048	
Civic skills	-.045		-.024		.085		-.001	
Age	-.017		-.073		-.045		-.046	
Female	.074		**.107**	†	**.118**	*	.076	
Income >$60,000	.037		.029		**.147**	*	**.100**	†
LDS	.012		-.013		.032		**.167**	**
Rural childhood	.005		-.066		.032		-.038	
Seasonal residents	.060		**.149**	*	.068		.081	
Non-residents	.026		.031		.044		**.116**	†
N	276		276		276		276	
ANOVA F test	1.878	*	2.837	***	3.919	***	2.883	***
Adj. R^2	0.057		0.113		0.168		0.115	

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

Residency status is a significant individual predictor of two actions after controlling for all other variables: forming or joining a group and contacting a public official. Comparing a full model to a model with the dummy set removed did not support residency status as a significant block predictor of involvement for either action, however (F change 1.726 to 2.061, p=0.180 and 0.129, respectively). Respondents' level of place attachment, knowledge of community affairs, personal efficacy, and motivation based on the greater good remained positive predictors of greater involvement. A one standard deviation increase in place attachment increased intended involvement in informal conversation activities by 0.167. Similarly, respondents' predicted involvement increased by 0.135 to 0.183 for a one standard deviation increase in knowledge, 0.132 to 0.195 for a one standard deviation increase in motivation based on the greater good, and 0.132 to 0.203 for a one standard deviation increase in efficacy.

Social- and time-based actions differ by their other explanatory variables, however. Being female or previously recruited for leadership positions increased the number of contact and public meeting actions chosen by 0.107 to 0.151, depending on the action and variable assessed. Having an annual income equal or greater than $60,000 increased both time-based actions by 0.100 to 0.147, while being a long-term resident or having an LDS affiliation increased predicted involvement in group-based activities by 0.150 and 0.167, respectively. In contrast, a one standard deviation increase in trust of political leaders decreased predicted involvement in group-based activities by 0.107. Additionally, a one standard deviation increase in local social connections increased intended involvement in public meetings by 0.186. The models are significant with adjusted R^2 ranging from 0.057 to 0.168.

Because less than half of respondents chose the action of giving money to address an issue for any of the scenarios posed, a binary logistic regression was run to explore measures of political orientation, motivation, socio-demographics, place attachment, civic resources, and social networks on the likelihood of monetary action (Table 48). The

Table 48. Binary logistic regression results for likelihood of monetary action.

	B	**S.E.**	**Exp(B)**	
Long-term resident	.024	.287	1.025	
Bear Lake Valley	.011	.294	1.011	
Local social connections	-.034	.046	.966	
Place attachment	.009	.151	1.009	
Knowledge of community affairs	.193	.085	**1.213**	*
Personal motivation	.011	.072	1.011	
Motivation for the greater good	.082	.063	1.086	
Personal efficacy	.069	.071	1.072	
Political trust	-.023	.043	.977	
Leadership recruitment	.398	.302	1.489	
Free time	.091	.139	1.095	
Civic skills	-.126	.099	.882	
Age	-.013	.009	.987	
Female	.010	.280	1.010	
Income >$60,000	.065	.279	1.068	
LDS	.356	.285	1.428	
Rural childhood	.389	.273	1.476	
Seasonal residents	.861	.342	**2.366**	*
Long-term resident	1.503	.620	**4.497**	*
Constant	-2.363	1.548	.094	
N		276		
-2 Log Likelihood		348.888		
Nagelkerke R^2		0.149		

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

model was developed using the same independent variables as previously described and the results are discussed using the log odds coefficient Exp(B).

According to the model, residency status is a significant individual predictor of the likelihood of monetary action, after controlling for all other variables. Seasonal and non-residents are two to four times more likely to donate money in response to a community issue relative to permanent residents. Removing the residency status dummy variables from the model supported this finding with a -2 log likelihood change of 8.773, which is significant at $p<0.05$. Respondents' knowledge of community affairs was the only other significant predictor; a one standard deviation increase increased the likelihood of monetary action by a factor of 1.2. The model is significant with a Nagelkerke R^2 of 0.149.

Scenario Case Studies

Because exploratory analysis indicated that involvement differed not just by type of action but also based on the type of issue being addressed, square root transformed OLS regressions were run to estimate coefficients for models exploring measures of political orientation, motivation, socio-demographics, civic resources, place attachment, and social networks on resident intended involvement in specific scenarios. Four scenarios were used as case studies: two high involvement scenarios, including a proposed subdivision and water resource degradation, one mixed scenario involving a proposed school closure, and one low involvement scenario: a development ban. The models were developed using the same independent variables as previously described and

results are presented in Table 49. Beta and standard error results are excluded for ease of comparison between models, but are available in Appendix D2.

Table 49. OLS regression results for predictors of involvement in specific community affairs.

	Subdivision		**Water Resources**		**School Closure**		**Development Ban**	
Long-term resident	.022		.084		.033		-.076	
Bear Lake Valley	.048		.089		**.090**	†	.010	
Local social connections	.059		.030		**.182**	**	.084	
Place attachment	**.153**	**	**.170**	**	**.138**	**	.005	
Knowledge of community affairs	**.257**	***	**.177**	**	**.192**	***	-.045	
Personal motivation	-.070		-.085		-.095		.071	
Motivation for the greater good	.073		**.138**	*	.047		**.124**	†
Personal efficacy	.068		.051		.102		.074	
Political trust	-.074		-.019		.063		-.024	
Leadership recruitment	.092		.070		.021		**.103**	†
Free time	.027		.000		.023		.023	
Civic skills	.009		-.022		**-.110**	*	.046	
Age	-.081		**-.096**	†	-.049		-.022	
Female	.028		.026		.065		-.021	
Income >$60,000	.028		.018		.032		-.006	
LDS	.022		.057		**.115**	*	.015	
Rural childhood	-.048		-.064		-.015		**-.130**	*
Seasonal residents	.043		-.022		**-.195**	**	.101	
Non-residents	**.106**	†	.097		-.015		.071	
N	345		343		337		340	
ANOVA F Test	3.240	***	2.933	***	6.920	***	1.811	*
Adj. R^2	0.110		0.097		0.251		0.043	

Similar to the previous models, respondents' level of place attachment and knowledge of community affairs are positively associated with the tendency to select more actions in response to all scenarios, excluding the proposed development ban. A one standard deviation increase in place attachment and knowledge of community affairs increased predicted involvement by 0.138 to 0.257, depending on the variable and scenario examined. Respondents' motivation for the greater good was a significant positive predictor for anticipated involvement in the water resource and development ban issues, increasing involvement by 0.138 and 0.124, respectively. Personal efficacy was not a significant predictor for any of the scenarios examined.

Other explanatory variables, including rural childhood, LDS affiliation, age, civic skills, local social connection, past leadership recruitment, and location were also significant predictors for individual scenarios. Respondents coming from a rural childhood background chose fewer actions regarding the development ban issue (-0.130), while past leadership recruitment increased predicted involvement for the same issue by 0.103. A one standard deviation increase in local social connections increased predicted involvement in the school closure issue by 0.182, as did owning property in Bear Lake (0.090) and having an LDS affiliation (0.115). In contrast, a one standard deviation increase in civic skills decreased intended involvement in a school issue by 0.110. A one standard deviation increase in age also decreased involvement in a water resource issue by 0.096.

Residency status is a significant individual predictor of two specific scenarios: the proposed school closure and proposed subdivision. Seasonal residents had a 0.195 decrease in predicted involvement in the school issue compared to permanent residents,

while non-residents had a 0.106 increase in predicted involvement for the subdivision issue, relative to permanent residents. Block tests, comparing models with and without the residency status dummy variables, supported residency status as a significant predictor of intended school-based action (F change 6.414, $p<0.01$), but did not support residency status as a significant predictor of subdivision-based action (F change 1.558, $p=0.212$).

Interview Findings

Key informant and random interviews of Bear Lake and Star Valley residents were conducted to provide additional information regarding residents' involvement in community affairs. Permanent respondents in Bear Lake and Star Valley are mixed as to their involvement. Over half stated that they are only slightly involved in community affairs, while the remaining residents believed that they are involved to very involved in community issues. Interviewees are active socially, taking part in family, church, and community events, and in general believe that their views are being expressed by political leaders. Interviewees do participate in various political activities, such as contacting a public official, working with others in the community to deal with development-related issues, attending a public meeting, or voting, although participation is not consistent across type of action chosen or issue addressed. When asked, permanent residents tend to characterize seasonal residents as poorly involved in community issues.

> Most seasonal residents only get involved in planning and zoning when they have complaints. They're concerned with services, not growth, and tend to be focused on personal issues. And as they get older, may not feel it's worth the effort to get involved. [Montpelier permanent resident, female]

> Seasonal residents don't really get involved. There's some concern over taxing… I suspect at some point they'll demand a voice, but I don't know when that'll be. [Garden City permanent resident, male]

Seasonal respondent interviews in Bear Lake and Star Valley tend to support permanent residents' assumptions that they are not highly involved in community affairs. Half of seasonal Star Valley and Bear Lake respondents say that they are not at all involved in community affairs, while the other half state that they are slightly involved. Seasonal respondents most commonly get involved in homeowners association activities, although they occasionally attend public meetings, contact officials, or get involved in community development issues, in addition to participating in specific church duties, local construction activities, and involvement in local programs and social activities.

> I don't go to meetings but do keep abreast. I put up a fence to replace the one the county plowed over last winter and was contacted by an official and told to shorten the fence, from 6 to 3 feet. I don't think my tenants are involved with anything. [Star Valley male seasonal resident from Jackson, WY]

> All no's [to list of activities]. That's why I can't complain. I need to get more involved. [Bear Lake female seasonal resident from Salt Lake City, UT]

> Occasionally I go to a planning and zoning meeting if it affects my property. [Bear Lake male seasonal resident from Craig, CO]

> The last one [meeting] we couldn't get there because they always hold meetings during the week and it's too hard and takes too much time to get there. [Bear Lake female seasonal resident from Salt Lake City, UT]

When asked whether their views are being represented politically, only half of seasonal residents, compared to most permanent residents, think that local officials are adequately representing their views.

> I haven't gone to a meeting, so I don't know what they're feeling. I hope so, but I know that if I want my voice to be heard I have to go to meetings. [Bear Lake seasonal resident from Salt Lake City, UT, female]

> I don't have a good feel. Typically people that run for office tend to be in real estate and are responsible for the explosive growth. These people tend to gravitate to those positions so they can further their agenda, and I don't mean that in a negative way. [Star Valley male seasonal resident from St. George, UT]

> I think so. We have a board of directors [on the homeowners' association] that have meetings and go to local official meetings. [Bear Lake female seasonal resident from Odgen, UT]

Opportunities to informally promote seasonal resident involvement via social interaction appear to be limited. Although all Bear Lake and Star Valley respondents stated that their social networks are largely formed by nearby friends and family connections, neighborhood gatherings, events, and church activities, the majority of permanent residents do not know any seasonal residents in their community. Seasonal Star Valley residents' social networks are mixed; who an individual knows is related to the type of community they live in. In comparison, while almost all seasonal Bear Lake residents know at least some seasonal residents in their community, only a quarter of respondents know any permanent residents.

> I'm one of the few people living permanently in [development name deleted]. I'd say the community is more than 80% seasonal… and I only know five households that live there year round. They're all part year residents living on my street coming from Salt Lake City. [Fish Haven male permanent resident].

> I have almost no interaction with the seasonal residents. I think that's a problem with higher income people is that even in other areas they don't know each other. In [development name deleted] I think people know each other more and that development's done in a coordinated effort could help bring about more interaction. [Bear Lake female permanent resident]

As with the previous chapter on resident attitudes, some caution is required in comparing permanent and seasonal resident interviews, due to sampling differences that could influence findings.

Discussion

Based on previous research, it was expected that this study would find that residents vary in their overall intention to participate in local community affairs based on socio-demographic, motivation, civic and SES resources, place attachment, political orientation, and social network characteristics. This hypothesis was partially supported. Neither socio-demographic characteristics, such as gender, age, childhood background, or religion, nor respondents' degree of political trust, civic and SES resources, or local social connections, were significantly associated with intention to become involved in community affairs. However, residents with higher levels of personal efficacy, knowledge of community affairs, place attachment, past leadership recruitment, and altruistic motivation did participate at higher rates, regardless of residency status.

These results are somewhat in line with previous literature findings. Higher levels of knowledge about community affairs and personal efficacy have both been shown to be significant factors in previous participatory studies (e.g., Brady et al. 1995, Scheufele 2000, Ulbig 2003, Verba et al. 1995). Higher levels of informal discussion and media use broaden individuals' exposure and understanding of community affairs and politics, leading to a stronger cognitive base for participation, while personal efficacy

provides an important feedback loop for reinforcing feelings of self-worth and influence regarding community decisions.

Place attachment is another common significant predictor of participatory action in the literature, with the premise being that higher-attached residents will be more involved in community affairs (e.g., Davidson and Cotter 1989, Ryan et al. 2005). This premise was supported by model results; place attachment, when defined as feeling welcome in a community,[10] was positively associated with increased involvement. Motivation was also a significant predictor of involvement. Motivation was separated into two categories: personal benefit and motivation based on the greater good. While the literature (e.g., Kaplan 1986, Knoke 1988) suggests that both types of motivation can influence involvement, only "altruistic" motivation played a role in influencing participatory action in this study.

The emergence of recruitment, but not general social connections, as a significant predictor of resident tendency for involvement can also be corroborated by previous research findings. Social ties, by themselves, may not influence participation (Hays and Kogl 2007), but Chwe (1999), Brady et al. (1999), and others have documented that stronger social networks with other residents specifically involved in community affairs should increase participation. Action recruiters tend to seek out participants who are likely to agree and take part, thereby over-targeting individuals who have participated previously.

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[10] Place attachment was defined in the previous chapter as a summed index of four statements: "I am very attached to Bear Lake (or Star Valley);" "I get more satisfaction out of being in Bear Lake (or Star Valley) than any other place;" "No other place can compare to Bear Lake (or Star Valley);" and "Bear Lake (or Star Valley) means a lot to me." This more general measure of place attachment was not a relevant predictor in exploratory models and was therefore not included in the final model.

Based on previous sociology and political science research, there were several variables that were anticipated to be significant predictors but yielded insignificant model results. Respondents' general civic skills, including an ability to write an effective letter and not self-censor in the face of opposing opinion,[11] were insignificant in this study's models, even though previous research (e.g., Rosenstone and Hansen 1993, Verba et al. 1995, Wolfinger and Rosenstone 1980) had indicated their relevance to participatory action. This difference is most likely a result of model development (e.g., including a wider range of variables as opposed to focusing solely on civic and socioeconomic variables), but could also reflect a failure to include appropriate measures of civic skills. Attempts to assess speaking ability as a civic skill, for example, were hampered by respondents' interpretation of the question as perceived sense of voice, leading to its inclusion in the personal efficacy scale rather than the civic skills scale.

Other variables that did not yield significant results, despite evidence in the literature, included the measures of political trust and socio-demographic characteristics. Depending on the theoretical approach, either higher levels of trust (e.g., Almond and Verba 1963, Finifter 1970) or higher levels of distrust (e.g., Gamson 1968, 1975) should

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[11] It is worth noting that there was contradictory evidence regarding residents' self-censorship between quantitative and qualitative results. While respondents generally believed they did not self-censor, based on high survey scores, interviews (see examples below) provided some evidence that self-censoring may be occurring among some residents, leading to lower levels of participation than might otherwise be the case.

"I think the commissioners are holding us back. We need fresh blood… We wanted an ethanol plant. It would help out agriculture and truck drivers, but it didn't happen. They also turned down a Harley Davidson shop. We need to know how decisions are made and who's making it. I can't say anything negative because of the impact to where I work." [Montpelier female permanent resident]

"When I was mayor, they said to take care of Garden City and they'd [County Commissioners] take care of the county. I think the agreement will be challenged some day, but I have my business and probably half are from the south side of the valley. I've seen maybe one tourist, so it would blow me out of the water to complain. It's not an issue I'd tackle. It'll need someone from outside the area with no ties to make that change." [Garden City male permanent resident]

increase participation. Some socio-demographic variables, such as younger age, male gender, and religious affiliation have also been positively associated with involvement. The fact that these variables are not significant in this study may simply be explained by the variables' lack of influence, when controlling for all other variables, or may indicate a need for future model refinement (since the overall model only accounted for 15% of the variability in involvement). The prevalence of certain socio-demographic characteristics across all respondents (such as gender or religious affiliation) may also limit tests' potential to detect significant differences for these variables in statistical analyses.

Predictors of self-reported political involvement share both similarities and dissimilarities with predictors of hypothetical community involvement, partially supporting initial hypotheses. Both measures of involvement are predicted by higher levels of knowledge about community affairs and place attachment. However, political involvement is predicted by strong local social connections and permanent residency, while intention for involvement is predicted by motivation, efficacy, and previous leadership recruitment. Differences in outcomes for these two models suggests that the choice of measurement strongly dictates how we perceive who participates and who does not; self-reported measures of political participation suggest that current participatory activity is dominated by permanent residents with strong attachment and connections to other politically involved residents, and is in keeping with qualitative findings. Whereas, hypothetical measures of involvement highlight the potential for additional resident involvement based on the key variables of motivation, political orientation, socio-demographics, and recruitment. Additional discussion of this finding is provided later in this chapter.

Type of Action. The hypothesis that a general measure of action would mask differences that lie within different kinds of actions, in terms of resource requirements, motivation, social networks, political orientation, and socio-demographic characteristics, was supported. Respondents' place attachment, knowledge of community affairs, personal efficacy, leadership recruitment, and altruistic motivation all remained significant predictors, but not consistently across all actions. Respondents' sense of place attachment was a significant predictor of informal conversation and monetary donations, while knowledge of community affairs was a significant predictor of all social- and time-based actions, excluding informal conversation. Personal efficacy was positively associated with informal discussion and group-based action, while altruistic motivation was a significant predictor of contacting officials or homeowners associations and involvement in group activities. Leadership recruitment was also positively associated with contact- and meeting-based action.

Action-based models also revealed several significant variables that were not associated with the general involvement model, including length of residence, income, gender, local social connections, political trust, and LDS affiliation. For group-based action, being LDS, a long-term resident, or having lower levels of political trust increased predicted involvement, while attending public meetings was positively associated with stronger local social connections. Having an annual household income of $60,000 or greater was positively associated with both time-based actions: attending public meetings and participating in group work. Being female was also positively associated with choosing more public meeting and public official contact actions.

Most of the differences between actions make sense given their nature and purpose. Informal discussion, which relies heavily on interaction with other members of the community but does not require extra time, motivation, or other skills to perform, should be the least intensive form of action and therefore require the least amount of resources to carry out. This premise is supported by the large number of respondents choosing "talk to friends, family, and/or neighbors" as an option for each scenario and in interviews, in addition to model results with only two strong predictors: personal efficacy and place attachment. Because informal discussion often serves as an opportunity to learn about issues, a priori knowledge of community affairs is not necessarily required for action. In fact, from a causality perspective, informal discussion is theorized to influence level of knowledge, rather than the other way around. However, a stronger sense of being part of their communities should increase residents' interest in community affairs, leading to greater informal discussion with family, friends, and neighbors. Personal efficacy's relationship with informal discussion is slightly more complicated. Previous research (e.g., Ikeda and Richey 2005) has suggested that higher levels of informal political discussion lead to higher levels of efficacy and political action. However, it also makes sense that higher levels of efficacy (feeling that your actions matter and can influence community outcomes) should have a reciprocal relationship, encouraging greater levels of discussion in an effort to both increase personal knowledge and influence the opinion and actions of others.

Contacting public officials or homeowners association leaders reflects a hybrid of both social- and time-based action. Although individuals use social networks to convey information and/or concerns, they also expend resources, in terms of time and money, to

carry out the action. Consequently, contact-based action's predictors differ strongly from those of informal discussion, shifting to share several key predictors with other time-based actions: knowledge of community affairs and motivation based on the greater good. These two variables provide respondents with the information and incentive needed to participate in more resource-intensive activities. The variables that contact-based action is missing (but that are significant for other time-based actions) are the influence of income and political efficacy. The relative low resource cost incurred by contacting public officials via phone or in person, however, is unlikely to disadvantage lower income residents. For non-permanent residents, contacting public officials may provide the easiest way to take part in community decisions given the constraints of living full time elsewhere and the ready availability of low-cost contact options such as e-mail and cellular telephones without long-distance charges. Personal efficacy is also most likely not a significant predictor for this particular action due to its focus on obtaining additional information regarding issues, rather than working towards influencing management decisions and outcomes. The significance of previous recruitment as a predictor of increased contact-based action highlights the action's social aspects; respondents who have been tapped for leadership positions in the past are more likely to know other community leaders and authority figures. Consequently, they may feel more comfortable utilizing these social networks to seek out additional information (e.g., Scheufele 2000).

For both social-based actions, two socio-demographic variables were expected to be associated with intended involvement: age and gender. The participatory literature (e.g., Jennings and Markus 1988, Schlozman et al. 1994) suggests that women will

participate slightly less frequently in political actions compared to men and that older residents will be less likely to participate in more intensive forms of political engagement compared to younger age groups. Age was not significant in this study's findings; the lack of difference is most likely explained by the older median age of Bear Lake and Star Valley residents (leading to higher levels of involvement among older respondents). Gender, while significant, did not conform to initial hypotheses; female respondents were equally or more likely to choose both social- and time-intensive activities compared to their male counterparts. Since the majority of political leaders in Bear Lake and Star Valley are male, it is possible that higher levels of participation in non-leadership venues may provide an outlet for political participation and influence for women in these counties.

The two time-based actions, attending public meetings and forming or joining a group, reflect very different actions in terms of purpose, time commitment, and resources required. Both are predicted by higher levels of knowledge about community affairs and financial resources, which provide respondents with a foundation and capacity for action. Since group-based action is often time and energy intensive, as compared to public meetings or other action types, it makes sense that residents would be more likely to need to feel that their actions could influence community outcomes in order to become more involved. Additionally, the finding that higher involvement is driven by residents' sense of altruistic motivation and/or distrust of local leadership decisions is supported by past NIMBY and collaborative research (where motivation based on the greater good is often a critical predictor of collective action in response to perceived community threats (e.g., Eser and Luloff 2003, Freudenburg and Pastor 1992, Steelman and Carmin 1998). A

closer look at the other significant predictors of group-based action, including LDS orientation and long-term residency, suggests that group-based action for this study is also driven in part by long-term social obligations.

Despite high percentages of respondents who reported they would attend meetings about the proposed scenarios, key informant interviews suggest that public meeting participation by residents is generally low unless they have a specific issue or concern to address. As discussed previously, political participation tends to increase as more people within an individual's social network also participate (Chwe 1999) and when individuals are connected to other politically involved residents (Brady et al. 1999). This study's positive association of past recruitment and stronger social ties to intended meeting involvement fits well within the existing research, especially given that attending public meetings has the strongest correlation to political activity of the actions assessed in this study.

In general, giving money to address an issue was not a common response for hypothetical scenarios. Non-permanent resident status was positively associated with monetary action, which is a logical finding if we assume that donations provide an alternative action for those who are unable or unwilling to participate in other ways. Surprisingly, income was not associated with the likelihood of giving money, however, while place attachment was a key predictor, leading to a slightly more nuanced understanding of monetary giving. Donations are often portrayed as an "attachment-free" form of involvement, since they require no personal connection between individuals and the issue being addressed, in addition to little resource expenditure except for a financial cost. But this study suggests that monetary donations require a modicum of concern and

awareness about local community affairs, particularly for residents who do not live in the community year-round.

Case Studies. There was partial support for the hypothesis that a general measure of action would mask differences, in terms of resource requirements, motivation, social networks, political orientation, and socio-demographic characteristics, based on the type of issue and level of impact. While clustering efforts did not support the notion that resident involvement differed based on the level of change, it did suggest that residents differentiate between scenarios based on relevance to their lives, leading to low and high involvement groups. A multivariate analysis of four case studies found that place attachment and knowledge of community affairs remained significant predictors of all scenarios except for the development ban, but that all other predictors differed in their influence depending on the issue posed.

The proposed middle school closure issue yielded predictors that make sense given its relevance to permanent residents, particularly those with, or having ties to, school-age kids. Respondents with higher levels of local social connectedness and an LDS affiliation were more likely to have higher levels of involvement. Bear Lake respondents were also more likely to take more actions relative to Star Valley, which is not surprising considering the different state of school systems across the two study sites. School issues are much more relevant to Bear Lake residents, based on current low enrollment numbers, compared to Star Valley's well-supported school system. The one unexpected model result was the negative association of civic skills on school involvement. Although past research (e.g., Verba et al. 1995) suggests that higher civic skills should increase overall involvement, in this particular case, school issues may be

drawing a different participatory group, including mothers, lower income residents, or those with lower educational attainment, whose civic skills may be lower but to whom the issue is of greater importance. In fact, one would not expect school issues to be a concern for seasonal and non-residents, who have the highest education and income levels (correlated to higher civic skills).

For the water resources issue, age and motivation were the key unique predictors of involvement. Because managing water resources is often a technically complex, time-intensive action, and previous research (e.g., Binstock 2006, Jennings and Markus 1988) has indicated that increasing age is negatively correlated with involvement in more intensive activities, it is not surprising to discover lower predicted levels of involvement by older residents for a water-related issue. Altruistic motivation also increased involvement, which again is a logical finding given Star Valley residents' widespread dependence on potable, reliable water resources and Bear Lake residents' concern over the management of Bear Lake.

The development ban issue had few significant predictors, in large part because people generally supported the notion and consequently felt that action was unnecessary.[12] This assumption is supported by a decrease in intended involvement based on residents' rural childhood background. Residents having lived in rural communities are less likely to desire additional population growth and tourism-based development (one-way ANOVA, $p<0.05$). And although past sociological literature (e.g., Cawley 1993, Greve 1994, Humphrey 2001;) has suggested that rural residents are also more likely to benefit from the sale of property to developers and/or are most resistant to

[12] Comments provided spontaneously by respondents in survey margins provide support for this assumption, e.g.: "Good idea in Bear Lake" or "Hooray!"

infringement on property rights (leading to potential disagreement with, or protest over, a proposed ban), in this study neither assumption held true. There was no significant difference in growth machine or property rights orientation by childhood community size ($p = 0.16$ and 0.462, respectively). Furthermore, previous research by Jackson-Smith et al. (2005b) has indicated that Utah rural residents express a wide range of property rights orientations.

Higher inclination for involvement in the development ban is predicted by respondents with stronger altruistic motivation or who have previous leadership recruitment experience, however. Given the widespread impact a ban would have on resident well-being in both Star Valley and Bear Lake, higher predicted involvement by residents who feel motivated to act on behalf of their community is a logical outcome. Previous past recruitment is also positively associated with tendency for involvement, possibly due to the fact that residents with a history of serving in positions of local leadership express stronger social norms for participation, e.g., that others expect them to be involved, even for "low interest" issues. These residents may also be more comfortable interacting in the political arena (where decisions about the ban would take place) due to past experience.

The proposed subdivision was the only issue without unique predictors; resident anticipated involvement was positively associated with increased place attachment and knowledge of community affairs, as were all other scenarios except for the development ban. These results suggest that concern over subdivision development was not relegated to any particular subgroup in Bear Lake or Star Valley. Rather, all residents who have a

level of awareness of ongoing community affairs and care about their community are more likely to get involved.

The shift in significant variables between issue-based versus action-type based regression models highlight some of the differences resulting from researcher choice regarding how to measure participation. Grouping participation by the type of action appears to focus predictors on the skills, incentives, and resources needed to achieve those actions, while grouping participation by the type of issue instead focuses predictors on what characteristics differentiate residents with regards to issue relevance. For example, having lower civic skills or owning property in Bear Lake may not be necessary to get involved in public meetings or group activities, but it does differentiate who cares about a school issue and chooses to get more involved. This concept explains why, unlike previous models, income and personal efficacy have little to no association with respondents' intensity of response to specific scenarios (since they measure resources required rather than who cares about the issue).

Overall, with two exceptions, residency status was not a significant block predictor for any of the measures of hypothetical involvement. However, in the self-reported involvement model and in interviews, seasonal and non-residents indicated a lower level of involvement relative to permanent residents. The difference in results is most likely due to how participation was measured in this study. In interviews and in reported political involvement, respondents were asked how often they participated in a list of actions (over the last 6 months for interviews). In the mail survey, however, *hypothetical* change scenarios were most frequently used as a basis for action. The former measure, while typical in participation studies, generally produces low estimates

of involvement, particularly for more "rare" activities. The latter measure represents a best case scenario, since it asks what people would be likely to do while ignoring the realities/social context that often limits those actions.

The choice to use intention, as opposed to actual behavior, is grounded in social psychology and the theory of planned behavior (TPB), which argues that people act in accordance with their intentions. As discussed in Chapter Two, intentions are important but complex in translating to actual behavior and most applicable for specific behaviors that have temporally stable intentions and same level of perceived control (Ajzen 2001). Choosing this approach likely inflates participatory rates (as demonstrated in a 2004 study by Ajzen et al. in which respondents' hypothetical willingness to pay results were overinflated compared to actual payments), but it can also provide a source of information not available through more standard participatory approaches. If we know what actions residents would be inclined to take, and for what situations, we can compare that data with current participation rates and identify obstacles and opportunities for improving participation for all residents, regardless of residency status.

It must be noted that the predictive power of the models presented in this chapter were significantly lower than those typically reported in participatory studies (e.g., R-squared's of 0.3 to 0.4). This discrepancy has several possible explanations. The use of behavioral intention, as opposed to actual self-reported behavior, may have inflated participation rates, thereby minimizing statistical differences among independent variables, or the independent variables themselves may have been relatively poor predictors (despite evidence to the contrary in the sociology and political science literature) and so their use in analyses may have led to the omission of other influential

variables that could have more fully explained the variability residents' intention to participate in community affairs.

From a management perspective, use of behavioral data can yield several useful tools. Leaders have the choice of looking at self-reported behavior or intention for involvement, depending on the type of information they are seeking. The former approach tends to correspond more closely with "typical" involvement by a minority of local residents (as suggested by local leader interviews), while the latter approach highlights the factors that encourage involvement for all residents, regardless of tenure. Leaders can use these factors to identify what the appropriate audience may be for a community issue, what the best tools are for informing residents and seeking their input (e.g., in-person meetings, website postings, newsletters), and how they might enhance involvement, if desired, through educational efforts (such as highlighting motivations for involvement or residents' attachment to their community).

CHAPTER 6

THE RELATIONSHIP BETWEEN ATTITUDES AND BEHAVIORAL INTENTIONS

Introduction

This chapter explores the relationship between residents' attitudes towards aspects of community change and their levels of intended involvement in community affairs. Very few published studies have explored the relationship between individual attitudes and participation in community affairs, most likely due to difficulties in measurement and causality concerns. Certainly, past literature suggests a complicated relationship. Attitudes are more strongly correlated with behavior when they are based on direct experience with the attitude object (Fazio 1989), behavior is measured using multiple indicators (Eagly and Chaiken 1993), behaviors are voluntary (Ajzen 1991), behaviors are measured at a similar level of specificity as the attitudes measured (Ajzen 1989), the attitude is strongly held and accessible, and/or there is limited difficulty required in performing the behavior. Despite these psychological and methodological challenges, however, studies linking resident attitudes to their behaviors can serve as an important management tool for rural community leaders, identifying when attitudes matter to action, thereby improving local leaders' capacity to understand and influence residents' response to community decisions.

Survey Findings

Survey-based bivariate and multivariate results exploring the relationship between resident attitudes and intended involvement in community affairs are reported below,

incorporating variables and models originally presented in Chapters 4 and 5. Readers are referred to previous chapters for additional background on variables, coding, and analytic techniques.

Bivariate Analysis

One-way ANOVA tests were run to compare overall predicted participation by attitude categories; two of the four assessed attitudes were significantly different (Table 50). ANOVA tables and post hoc results can be found in Appendix D2. Statistically significant results for this test and all further tests in this chapter are coded as following: † = p<0.1, * = p<0.05, **=p<0.01, and *** =p<0.001. Respondents who were neutral or

Table 50. ANOVA results comparing intention to participation by attitude categories.

Variable		Statistic	Strongly Disagree		Disagree		Neutral		Agree	Strongly Agree
Agricultural Preservation	**	Mean	14.6		8.0	*	11.3	*	15.2	16.4
		S.D.	10.9		1.6		8.1		9.6	10.5
		N	7		5		69		170	142
Limited Options		Mean	15.9		16.3		13.0		13.0	13.2
		S.D.	9.5		10.7		8.8		8.7	12.7
		N	28		162		146		50	6
Control Over Development	*	Mean	11.5		13.1	*	12.5	†	16.1	15.9
		S.D.	7.0		10.8		8.4		9.8	10.6
		N	4		25		101		175	85
Capacity for Growth		Mean	16.5		13.5		13.8		13.7	13.1
		S.D.	11.0		9.5		8.8		10.0	8.5
		N	20		126		222		120	16

disagreed with agricultural preservation and the need for control over development participated at significantly lower rates than those who agreed or strongly agreed with either attitude (Dunnett's C post hoc tests). The failure of either the strongly disagree or strongly agree category (depending on the variable) to yield significant results in keeping with observed trends was most likely due to the influence of small N's and high standard deviations.

One-way ANOVAs and cross-tabulations were also run to compare predicted participation for specific involvement scenarios based on attitude scores. Results followed the same patterns as the general involvement data presented above (see Appendix D). For example, respondents chose more actions in response to a proposed subdivision if they agreed or strongly agreed with the need for developmental controls and agricultural preservation, while respondents were more likely to get involved in a water resource issue if they disagreed that there were limited options for development. Cross-tabulation results also suggested that respondents who expected to take no action had, in general, less extreme attitudinal scores (i.e.,. they were more often missing any strongly agree or strongly disagree categories and/or had a higher percentage of neutral responses) relative to respondents' choosing one or more actions.

Multivariate Analysis

OLS regression was run to estimate coefficients for a model exploring attitudinal impacts on overall involvement in community affairs, when controlling for all other variables. Attitudes towards aspects of community change, including capacity for population growth, need for developmental controls, agricultural preservation, and

limited community options, were the four primary independent variables. Control variables included age, gender (1=female, 0=male), income (1=$60,000 or more, 0=less than $60,000), length of residence (1=long-term resident, 0=short-term), religious affiliation (1=LDS, 0=other), childhood community size (1=rural, 0=urban), county (1=Bear Lake Valley, 0=Star Valley), and residency status (coded as dummy variables with permanent residents as the reference category). The model also included the variables of political trust, sense of efficacy, personal and "greater good" motivation indices, knowledge of community affairs, local social connections, leadership recruitment, place attachment, free time, and civic resource capacity.[13]

The result of the regression model is provided in Table 51. Results are discussed using the standardized coefficient (B), and significant variables are marked with bold type and asterisks based on the level of significance. In general, results matched Chapter 5 findings; knowledge, leadership recruitment, personal efficacy, and altruistic motivation remained significant predictors. The attitude variables, however, were not significant individual predictors of overall intention to become involved in community affairs. Although adjusted R-squared increased slightly, from 0.149 to 0.166, over original model results, the ANOVA F statistic decreased, suggesting that inclusion of the attitudes may not have improved model fit.

[13] The choice was made to run the same models as the previous participation chapter to allow for a comparison of attitudinal effects in relation to other independent predictors. Attempts were made to correct for potential simultaneity between attitudes and behavior by using a two-stage least squares regression model, but it was not possible to develop appropriate instrumental variables to create such a model. Consequently, model results have a higher level of uncertainty than previous OLS regressions and should be interpreted with a degree of caution.

Table 51. OLS regression results exploring the relationship of attitudes to overall involvement in community affairs.

Variable	**Unstandardized Coefficients**		**Standardized Coefficients**	
	B	Std. Error	Beta	
(Constant)	-17.912	8.599		
Long-term resident	.433	1.333	.021	
Bear Lake Valley	1.817	1.372	.088	
Local social connections	.367	.217	**.132**	†
Place attachment	1.005	.705	.091	
Knowledge of community affairs	.687	.389	**.118**	†
Personal motivation	-.240	.335	-.052	
Motivation for the greater good	.601	.292	**.162**	*
Personal efficacy	.576	.328	**.139**	†
Political trust	-.305	.193	-.103	
Leadership recruitment	2.634	1.382	**.126**	†
Free time	.470	.639	.048	
Civic skills	.170	.445	.024	
Age	-.045	.042	-.064	
Female	1.434	1.336	.066	
Income >$60,000	1.873	1.281	.087	
LDS	.528	1.303	.025	
Rural childhood	-.229	1.255	-.011	
Seasonal residents	1.112	1.553	.054	
Non-residents	.930	2.650	.024	
Agricultural preservation attitude	1.140	.790	.096	
Capacity for growth attitude	.332	.234	.101	
Development control attitude	.168	.252	.042	
Limited options attitude	-.573	.393	-.092	
N		276		
ANOVA F test		3.166***		
Adj. R^2		0.162		

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

To test the notion that attitude ambivalence, rather than agreement or disagreement, matters to tendency for involvement, the model was re-run using the four attitudes recoded to 0 if their average score was neutral or 1 if their score reflected either agreement or disagreement. The result of the regression model is provided in Table 52. Adjusted R-squared improved marginally again over the preceding model results. More importantly, two of the four variables were significant; non-ambivalence regarding community options and the need for developmental controls and regulation increased predicted involvement in community affairs by 0.098 and 0.140, respectively.

Because previous social psychology literature has suggested that the relationship between attitudes and behavior is stronger at more similar levels of measurement, regression analyses were also run comparing community change attitude impacts for specific scenarios. Scenarios, analysis techniques, and variables were chosen to remain consistent with Chapter 5 model results and to allow for a comparison of attitudinal impacts, when controlling for all other variables. The results of the four regression models are presented in Table 53 using the standardized coefficient B. Beta and standard error results are excluded for ease of comparison between models, but are available in Appendix D2.

As in the previous model, scenario-based model results remained fairly consistent with previous chapter findings. Adjusted R^2 increased for all models except for the development ban issue while the ANOVA F statistics decreased. Intended involvement in a subdivision issue increased by 0.112 for a one standard deviation increase in support

Table 52. OLS regression results for attitude ambivalence influence on tendency for community involvement.

Variable	**Unstandardized Coefficients**		**Standardized Coefficients**	
	B	Std. Error	Beta	
(Constant)	-15.346	6.964		
Long-term resident	.357	1.295	.017	
Bear Lake Valley	1.612	1.350	.078	
Local social connections	.406	.214	**.146**	†
Place attachment	1.317	.694	**.120**	†
Knowledge of community affairs	.522	.392	.090	
Personal motivation	-.171	.334	-.037	
Motivation for the greater good	.610	.292	**.165**	*
Personal efficacy	.613	.323	**.148**	†
Political trust	-.256	.192	-.087	
Leadership recruitment	2.692	1.370	**.128**	†
Free time	.470	.634	.048	
Civic skills	.158	.441	.022	
Age	-.052	.042	-.075	
Female	1.093	1.316	.050	
Income >$60,000	1.892	1.273	.088	
LDS	.308	1.299	.015	
Rural childhood	-.030	1.245	-.001	
Seasonal residents	1.049	1.542	.051	
Non-residents	.866	2.628	.022	
Agricultural preservation ambivalence	.682	1.353	.032	
Population growth ambivalence	-.093	1.219	-.005	
Development control ambivalence	3.414	1.454	**.140**	*
Limited options ambivalence	2.015	1.220	**.098**	†
N		258		
ANOVA F test		3.379***		
Adj. R^2		0.176		

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

Table 53. OLS regression results predicting attitude impacts on scenario involvement.

	Proposed Subdivision		**School Closure**		**Water Resources**		**Development Ban**	
Long-term resident	.035		.025		**.100**	†	-.052	
Bear Lake Valley	.059		**.126**	*	**.114**	†	.020	
Local social connections	.085		**.177**	**	.053		.086	
Place attachment	**.114**	*	**.131**	*	**.129**	*	.014	
Knowledge of community affairs	**.212**	***	**.169**	**	**.138**	*	-.046	
Personal motivation	-.077		-.097		**-.133**	*	.071	
Motivation for the greater good	.068		.045		**.149**	*	.118	
Personal efficacy	.051		.105		.062		.057	
Political trust	**-.105**	†	.051		-.047		-.009	
Leadership recruitment	**.097**	†	.022		.063		.085	
Free time	.032		.019		.022		.012	
Civic skills	.015		**-.092**	†	.001		.057	
Age	-.082		-.037		**-.109**	†	-.020	
Female	.031		.055		.000		-.014	
Income >$60,000	.052		.033		.021		-.028	
LDS	.000		**.094**	†	.028		.025	
Rural childhood	-.045		-.009		-.060		**-.134**	*
Seasonal residents	.050		**-.209**	***	-.006		.099	
Non-residents	.081		-.040		.070		.086	
Agricultural preservation attitude	.055		.080		.097		.095	
Population growth attitude	.077		**.116**	†	.092		.016	
Development control attitude	**.112**	†	-.043		-.047		-.060	
Limited options attitude	**-.107**	†	-.036		**-.133**	*	.010	
N	343		336		341		337	
ANOVA F Test	3.108	***	5.681	***	2.714	***	1.233	
Adj. R^2	0.132		0.255		0.110		0.017	

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

for control over development and decreased by 0.107 for a one standard deviation increase in belief that the community has limited growth options. A one standard deviation increase in support for community capacity for population growth increased predicted involvement in a school closure issue by 0.116, while involvement in a water resource issue decreased by 0.133 with a one standard deviation increase in limited option attitudes.

Discussion

The research hypothesis that community change attitudes would not be associated with involvement in community affairs, when controlling for all other variables, was partially supported. Although residents' attitudes failed to yield significance with regards to overall intended involvement, they were significant predictors when re-evaluated based on ambivalence or as predictors of involvement in specific community issues. Non-ambivalence regarding developmental regulations and control over community outcomes was positively associated with greater tendency towards action. These results are in keeping with the social psychology literature (e.g., Ajzen 1989, 1991) which suggests that attitudes need to be strong and accessible in order to influence behavioral intentions. However, some caution is warranted in presenting these findings, as higher adjusted R-squared and lower ANOVA F statistics provide contradictory evidence regarding impact to overall model fit based on the inclusion of resident attitudes.

For individual scenarios, respondents' perception of their control over community outcomes was the strongest attitudinal predictor of involvement, negatively impacting involvement in two of the four hypothetical issues: a proposed subdivision and water

resource degradation. This result makes sense given that residents should be less inclined to participate in community affairs if they believe that they have no influence over community outcomes. In fact, it was expected that the limited options attitude would also be significant for the school closure and development ban issues. Previous chapter findings provide alternative explanations, however. Lack of action was the preferred choice for respondents who were either happy or unhappy with the concept of a development ban, thereby minimizing the impact of limited option attitudes on residents' intensity of involvement, while respondent involvement in the school closure issue was driven by social ties and not connected to larger concerns over community change.

It was also expected that individuals with pro-growth attitudes would be more likely to support development and therefore also more likely to get involved in a ban or subdivision-related issue. Neither population growth nor developmental control attitudes were significant predictors of likely involvement in a development ban, however, while only higher support for control over developments had a positive association with predicted involvement in a proposed subdivision. The lack of significance may come from resident concerns that growth will not improve economic condition. Previous research has suggested that there is no clear evidence that growth activities generate economic growth (Krannich and Humphrey 1983, Lyon et al. 1981, McGranahan 1984), and community development can generate significant fiscal costs, social inequity, and environmental damage (Logan and Molotch 1987). The positive association between support for population growth and involvement in a school closure issue provides some support for this assumption. The issue's correlation with Bear Lake and its financially weaker school district suggests that residents recognize that population growth could

augment existing school budgets and improve its overall cost efficiency with the addition of new students.

Overall, this study is in keeping with other research in the social psychology literature, which suggests that general attitude assessments rarely relate to specific actions or behaviors (e.g., Ajzen 1989). Although this study found a weak relationship between attitudes and behavioral intentions that did marginally improve upon increasing issue specificity, model predictive power was still low, attitudes were not the strongest predictors of intended involvement, and inclusion of the attitude variables increased within- versus between-group variance. Additional research is clearly needed to improve attitude-behavior linkages, in particular focusing on designing attitudinal measures at more similar levels of specificity to the behaviors of interest.

Despite a weak attitude-behavior relationship, results do suggest an opportunity for rural leaders to potentially improve resident involvement in community affairs through education and outreach (thus addressing resident ambivalence over aspects of community change). Although past literature on communication effects suggests that simple exposure to given messages will not necessarily influence knowledge, attitude, or behavioral change (e.g., Rogers 1995), strategically planned information programs that are carefully targeted for relevant audiences and designed to encourage citizen engagement and participation can be influential.

CHAPTER 7

OUT-MIGRATION: AN ALTERNATIVE ACTION

Introduction

Out-migration is a recurring theme in the Rocky Mountain West, historically connected to global or localized economic shifts. Documented cases of out-migration in "New West" communities suggest that amenity-growth related communities are experiencing displacement of lower wage residents from high amenity towns due to increasing land values and housing costs in a limited job market. Amenity-growth related out-migration may not be driven solely by economic demands, however. For residents in "New West" communities, the primary motivations to move into the area include lifestyle change, enhanced quality of life, location-specific amenities, and improved residential satisfaction (e.g., Barcus, 2004, Clark and Hunter 1992, Von Reichert 2001). Loss of those lifestyle values, therefore, may also drive residents voluntarily out of their community. This chapter explores both lifestyle and financial reasons for out-migration behavior among permanent, seasonal, and non-residents in Bear Lake and Star Valley. Understanding out-migration trends may allow local community leaders to identify push-pull factors that could ultimately reshape community composition and dynamics if not addressed through management efforts.

Survey Findings

Survey-based frequency distributions and univariate, bivariate, and multivariate results exploring the relationship between resident values, socio-demographic

characteristics, and expectation for out-migration are reported below. Readers are referred to pages 74-75 and 83 in Chapter 3 for additional background on variables, coding, and analytic techniques.

Frequency Distribution

In general, respondents would not anticipate moving if confronted with a series of community changes (Table 54). Respondents were most likely to "probably" or "definitely" move due to a loss of the area's natural beauty or if the area no longer felt like a relaxing vacation spot. Respondents were least likely to move if their children, family, or friends moved away. Additionally, items provided by respondents in an open-ended "other" category, including concerns over individual or spousal health and local

Table 54. Frequency distribution of residents' expectation to move when confronted with change.

	Would Definitely Not Move	Would Probably Not Move	Would Probably Move	Would Definitely Move
Loss of job	39.3	35.2	15.9	9.6
Increased cost of living	25.7	57.0	13.1	4.2
Increased property taxes	17.6	53.8	22.4	6.2
No longer feels like a farming area	26.5	51.3	19.1	3.1
Large profit from selling property	18.2	49.0	25.7	7.1
Reduced access to public lands for recreation	16.2	44.3	27.1	12.3
Increased crowding at recreation sites	4.4	52.6	24.0	9.1
Loss of area's natural beauty	10.8	33.3	36.6	19.3
Children grow up and move away	45.9	44.1	7.1	2.9
Family and friends move away	37.8	46.7	12.8	2.7
No longer feels like a relaxing vacation spot	15.5	35.0	34.7	14.8

health care, additional population increases, overdevelopment, and crime or safety concerns garnered high enough scores to indicate that respondents would probably or definitely move from the area. Because so few respondents listed these concerns though, they were unable to be included in frequency distributions or other statistical analyses.

Univariate and Bivariate Results for Dependent Variables

Most residents do not expect to sell their property and move from the area in the next 5 years; only 15.9% of all respondents anticipate moving in the near future. Cross tabulation results provided in Table 55 suggest that there is no difference in expectation to move based on residency status (chi-square = 3.1, p=0.212).

Residents who expect to move in the next 5 years chose fewer actions overall, across scenarios ($t=2.27$, $p<0.05$), than residents who do not expect to move, which provides some validation of respondent scenario action choices (as it implies that respondents considered their responses realistically based on their current status). Movers also have slightly higher support for the notion that there are limited options for growth in their community ($t=-2.279$, $p<0.05$) and are less satisfied with their community

Table 55. Percentage of respondents expecting to sell their property and move in the next 5 years, by residency status.

	Permanent Residents	**Seasonal Residents**	**Non-residents**
Will probably or definitely not move (pct.)	82.2	87.1	75.0
Will probably or definitely move (pct.)	17.8	12.9	25.0

compared to non-moving respondents (chi-square = 10.3, $p<0.01$). Residents who expect to move are not more apathetic towards change, however; there was no statistically significant difference between movers and non-movers' choice of "do nothing" actions in response to scenarios ($t=-1.1$, $p=0.273$).

Almost 70 percent of respondents also chose no "move from your community" actions in response to the ten hypothetical scenarios. A frequency comparison of out-migration actions by hypothetical scenario is provided below (Table 56). Respondents

Table 56. Percentage of residents choosing to move in response to specific community changes.

	Move Out of Your Community
A new subdivision is proposed in your community	1.9
Road traffic and noise worsen in your community due to additional summer tourists	3.9
Your public land access is restricted by new hillside homeowners	5.8
The community plans to close a middle school due to low student enrollment	1.2
Residential development in the valley reduces the quality and quantity of existing water resources	4.8
County commissioners propose bringing in an ethanol plant, which some residents fear may pose a health or safety risk	6.6
Your property taxes increase to cover new sewer and water lines	2.9
Construction of nearby homes reduces your views of the surrounding mountains or lake from your house	10.3
Residential development in your community places a strain on existing police and ambulance services	1.9
Community leaders propose a ban on further development in your area for the next five years	1.0

were most likely to indicate that they would consider moving if nearby construction reduced their views of nature, with approximately 10% of respondents choosing that action. Reduced public land access, a proposed ethanol plant, and reduced water quality and quantity were the next three changes most likely to cause respondents to move from their community, while less than 4% of respondents would move in response to all other community changes. Respondents who chose out-migration as a response to one of the scenarios typically did not select any other actions as potential responses to that scenario, although multiple options were left open to them. Respondents also did not tend to select out-migration as an option for all scenarios; the total number of out-migration actions selected by all respondents only ranged from 0 to 5, indicating respondent discrimination by scenario.

Cross tabulation revealed no significant difference in likelihood of out-migration by residency status (chi-square= 0.041, p=0.98). A frequency comparison of out-migration for specific scenarios, by residency status, also found only one slightly significant (chi-square= 4.915, $p<0.1$) difference; permanent residents were statistically more likely to move relative to seasonal residents based on a proposed middle school closure.

Multivariate Analysis Results

Binary logistic regression was used to estimate coefficients for two models: one model predicting residents' likelihood of out-migration in the next 5 years and the other predicting residents' likelihood of out-migration in response to hypothetical community changes. Residency status (coded as dummy variables with permanent residents as the

reference category) was the primary independent variable, with control variables of age, education (1=college or more, 0=other), gender (1=female, 0=male), religious affiliation (1=LDS, 0=other) childhood community (1=rural, 0=urban), length of residence (1=long-term resident, 0=short-term), income (1=$60,000 or more, 0=<$60,000), education (1=Associates Degree or more, 0=some college or less), and county status (1=Bear Lake Valley, 0=Star Valley).

Because too few non-residents were coded as "1" for the dependent variable in either model to allow for statistical analysis, and because a chi-square test indicated that there was no significant difference in out-migration based on residency status, seasonal and non-residents were grouped together for analysis purposes. The models also included place attachment, change in community satisfaction level (0=equal or more satisfied, 1=less satisfied), and knowledge of community affairs. The result of the regression models are provided in Table 57. Results are discussed using the odds ratio: Exp(B). Significant variables are bolded and asterisked based on the level of significance: † = $p<0.1$, * = $p<0.05$, **=$p<0.01$, and *** =$p<0.001$.

Decreased community satisfaction and level of place attachment were both significant predictors of resident likelihood of moving in the next five years. Respondents with decreased community satisfaction were almost three times more likely to move in the next five years compared to residents who were satisfied with their community, while a one standard deviation increase in place attachment decreased the likelihood of moving by a factor of 0.860, when controlling for all other variables. Residency status was not a significant predictor after controlling for all other variables and the model was statistically significant with a Nagelkerke R^2 of 0.156.

Table 57. Binary logistic model results predicting out-migration behavior.

Variables[14]	**Move in the Next 5 Years**				**Move in Response to Community Changes**			
	B	S.E.	Exp(B)		B	S.E.	Exp(B)	
Long-term resident	-.544	.397	.580		-.771	.312	**.463**	*
Bear Lake Valley	-.500	.394	.606		-.121	.310	.886	
Decreased community satisfaction	1.017	.378	**2.765**	**	.575	.302	**1.777**	†
Knowledge of community affairs	-.025	.123	.976		.007	.101	1.007	
Age	.024	.014	1.024		-.017	.011	.983	
Female	.096	.391	1.100		.418	.312	1.519	
Income $60,000+	-.034	.408	.967		-.159	.313	.853	
Associates Degree+	.206	.420	1.229		-.354	.308	.702	
LDS	-.545	.403	.580		.409	.322	1.505	
Rural childhood community	-.355	.399	.701		.663	.305	**1.941**	*
Place attachment	-.151	.060	**.860**	*	.041	.050	1.041	
Seasonal and non-residents	-.058	.406	.944		-.062	.314	.940	
Constant	-.278	1.575	.757		-.662	1.250	.516	
N	299				257			
-2 Log Likelihood	201.853				283.006			
Nagelkerke R^2	0.156				0.135			

†= p<0.1, * = p<0.05, ** = p<0.01, *** = p<0.001

[14] Exploratory models included a curvilinear age + age-squared variable to allow for higher chances of out-migration in early and later ages and dummy variables for residency status + length of residence (e.g., permanent, long-term residents versus seasonal, long-term residents). Since the variables did not significantly improve model fit, they were removed from final analysis.

Respondent likelihood of selecting outmigration as a response to hypothetical community changes was also predicted by decreased community satisfaction; respondents who were less satisfied with the community compared to five years previously had an increased likelihood of choosing out-migration by a factor of 1.8, while residents from a rural childhood community were almost twice as likely to select out-migration as respondents from an urban background. In contrast, long-term residents were only half as likely to out-migrate in response to community changes, as compared to short-term residents. The model was statistically significant with a Nagelkerke R^2 of 0.135.

Discussion

The hypothesis that respondents are more likely to move out of the area if they experience a loss of quality of life or reduced attainment of lifestyle and family goals than for economic reasons was supported. From a univariate perspective, none of the economic factors listed (loss of job, increased cost of living and property taxes, potential large profit from selling property) yielded average scores that placed respondents into the "probably" or "definitely would move" category. While lifestyle-based scores were also low, the category did encompass the few factors provided by respondents that would make respondents move, such as fears of overcrowding or insufficient health care. Statistical models also suggest that only non-economic factors, such as strength of place attachment and decreased community satisfaction, play a role in out-migration behavior.

Previous research (e.g., Nelson 1997, Nelson and Beyers 1998) has indicated that since many new residents' sources of income are independent of the local economy, they

are less sensitive to changing local economic conditions and therefore less likely to out-migrate in response to those factors. However, low-wage residents may be pushed out of the community by rising land values and housing costs. The results provided here suggest that source of income and dependence on the local economy are not significant predictors of out-migration; age, which served as a proxy of income type (older residents were more likely to possess sources of income that were independent of the local economy, such as Social Security payments or retirement pensions, while younger residents were more likely to depend on local wages and pay), did not influence the likelihood of moving. Likewise, residents in a lower income bracket do not appear to be experiencing forced out-migration in response to rising land values and housing costs. Other economic factors for out-migration cannot be discounted based on these results, however.

Out-migration was also expected to be based on residents' life cycles; young adults were expected to be more likely to out-migrate in response to education and career opportunities. Exploratory models allowing for life cycle migration changes using a curvilinear age variable, however, did not reveal significant out-migration tendencies. This lack of significance is most likely explained by survey respondent bias: lower age classes were not well represented by survey respondents.

It is also interesting to note the differences between outcomes of the model for expectation to move and the model for likelihood of selecting out-migration as an action in response to community changes. The minimal (-0.035) correlation between the two dependent variables and the different model results suggest that the two variables are not the same. In particular, the fact that neither short-term respondents or respondents with a

rural childhood community have a significantly higher expectation to move in the next five years but are roughly two times more likely to select out-migration as a response to community change scenarios implies that the latter variable may be more of a measure of concern about the community than an actual measure of likely out-migration behavior.

Overall, out-migration is a small, yet important aspect of community change in Bear Lake and Star Valley. Roughly 16% of all respondents anticipate moving in the next five years (11% in Bear Lake and 22% in Star Valley), which is one and a half times the average percentage of Utah or Idaho taxpayers moving out of their county in 2006 and two and a half times the 2006 average for Wyoming taxpayers (U.S. Census 2006). These higher than average patterns suggest that changing community conditions may be influencing out-migration behavior and that further research is needed to understand the factors influencing respondents' decisions to leave their community. Given the relatively small size of this population, qualitative efforts (like the approach that this study proposed but was unable to address) may yield a more nuanced understanding of resident behavior and help to answer research questions regarding who is moving out, why, and what are the ramifications for community leaders seeking to manage growth while maintaining quality of life and adequate economic conditions.

Community leaders can use migration results to evaluate several push-pull factors that could reshape community composition and dynamics, such as local area economy and skills needs, local area economic development strategies, current and future workforce demographics, and in-migration and out-migration issues. Although study results did not identify specific economic factors that increased the likelihood of out-migration, past research (Gober et al. 1993) has suggested that lower income, permanent

residents are at higher risk for forced out-migration in natural amenity communities. Loss of a subset of residents could consequently impact which occupations might experience a shortage of skilled workers and/or how local economic strategy goals might exacerbate or ameliorate out-migration based on job growth, earnings, or economic diversification potential. Understanding demographic shifts due to out-migration can also highlight what the demographic characteristics of the current workforce are, how the area's demographics might change, and what the needs/planning implications of the demographic profile expected of the area's workforce of tomorrow might be. Similarly, results can point out the implications of in- and out-migration for local community, social, and health services. This study highlights the need to maintain a high quality of life, in the face of recent development, in order to decrease resident likelihood of out-migration.

CHAPTER 8

SYNTHESIS AND CONCLUSIONS: TOWARD AN INCLUSIVE STRATEGY FOR CITIZEN INVOLVEMENT

Introduction

Many rural communities across the Rocky Mountain West are undergoing a series of significant transformations, including land use shifts, population growth, second home development, and emergent recreation and tourism economies. Researchers have attempted to assess community capacity to respond to these changes using a variety of scales and approaches (e.g., Greider and Little 1988, Parisi et al. 2004, Steelman et al. 2004, Tolbert et al. 2002). This study focused on individual-level impacts; in particular, residents' attitudes towards aspects of community change and their willingness to participate in community affairs. This chapter briefly summarizes relevant literature on participatory action in communities as well as findings of the present study, and then provides a practical application by exploring how local leaders can use resident attitudes and behavioral information to improve public participation opportunities. Finally, this chapter discusses research limitations and future research needs.

Summary of Research Findings

Studies of resident attitudes have typically looked at length of residence and, more recently, residency status as indicators of the likelihood of community conflict over land use planning and management decisions. Results have typically been mixed: while

length of residence and residency status have sometime yielded significant differences, more often they are not effective predictors of resident attitudes. My study similarly found that while residents do express subtle attitudinal differences based on residency status classification, residency status is not an important predictor with regard to resident land use change attitudes and perceived control over community outcomes. Non-residency status factors, such as development activity, place attachment, knowledge about community affairs, location, values for property ownership, or community satisfaction, were generally more influential upon residents' attitudes.

Differences that emerged between survey and interview findings, however, highlight two important issues to consider when designing and evaluating attitudinal studies. The first issue involves the discrepancy between research trends and resident perceptions; although an increasing number of studies (e.g., Blahna 1990, Clendenning 2004, Clendenning et al. 2005, Connelly and Brown 2001, Fortmann and Kusel 1990, Marcouiller et al. 1996, Smith 1997, Williams 2006) have found minimal attitudinal differences across resident residency status type or length of residency status categories, residents may still carry misconceptions regarding how other groups feel about community change issues. In this study, while interviewees were generally able to capture at least some aspects of "other" residency status groups' views, they still underestimated the variability of attitudes expressed, leading to a less nuanced categorization of "other" group opinions. This underestimation was consistent across all residency status categories, regardless which "other" group was being remarked upon, and could increase the risk for conflict or an "us versus them" mentality if not recognized and addressed in local venues.

The second issue involves the appropriate measurement scale in attitudinal studies. General attitudinal statements, as used commonly both in the literature and in this survey, do not require respondents to think about context or possible real life constraints that might influence their opinions when confronted personally with the issue. Consequently, they may yield inflated response scores based on a desire by respondents to provide answers that are emotionally appealing (Ajzen et al. 2004). Using such findings to assert a low potential for conflict can, therefore, be misleading; shared general attitudes may not translate to shared acceptability of specific management decisions or trade-offs. This study developed a coarse measure for assessing trade-offs by asking respondents to appropriate finite funds among five different community goals. Although similarities across resident categories persisted, several key differences also emerged, in particular, seasonal residents' strong focus on developmental control relative to that of permanent or non-residents.

Past participatory research (e.g., Chavis et al. 1986, McLeod et al. 1996, Nie et al. 1996, Rosenstone and Hansen 1993, Scheufele et al. 2004, Schlozman et al. 1994, Verba et al. 1995, Wandersman et al. 1987, Wolfinger and Rosenstone 1980) has indicated that resources, motivation, place attachment, socio-demographics, and political orientation can all be significant predictors of resident involvement at a national scale. This study found that, at a community level, resident intention to get involved in community affairs was positively correlated with greater personal efficacy, knowledge of community affairs, place attachment, past leadership recruitment, and altruistic motivation, regardless of residency status. However, variables that had been identified as relevant by other researchers, such as civic resources, measures of political trust, civic and socioeconomic

resources, social networks, and socio-demographic characteristics were not significant for reasons discussed further in the Limitations and Future Research Needs section of this chapter.

Predictors for intention to participate also differed based on whether participation was measured by action type or by issue. Measuring participation by the type of action appears to focus predictors on the skills, incentives, and resources needed to achieve those actions. Grouping participation by the type of issue, however, focused predictors on the characteristics that differentiated residents with regard to issue relevance. This difference has important methodological considerations, based on what information researchers are hoping to obtain from their study.

Overall, with few exceptions, residency status was not a significant quantitative predictor for any of the measures of involvement. However, in interviews, seasonal and non-residents indicated a lower level of involvement relative to permanent residents. The difference in results is again most likely due to how participation was measured in this study. In interviews, respondents were asked how often they participated in a list of actions over the last six months. For the mail survey, however, hypothetical change scenarios were used as a basis for action. The former measure, while typical in participation studies, generally produces low estimates of involvement, particularly for more "rare" activities. The latter measure represents a "best case scenario," as it asks what people believe they would be likely to do while ignoring the realities or social context that often limits those actions.

The choice to use intention, as opposed to actual behavior, is grounded in social psychology and the theory of planned behavior (TPB), which argues that people act in

accordance with their intentions. Ajzen (2001) has warned that intentions are important, but complex in translating to actual behavior; intentions only match actual behavior for specific behaviors that have temporally stable intentions and same level of perceived control. Despite these challenges, using intention as a basis for understanding resident action can provide a source of information not available through more standard measurements. If we know the "ideal" outcome then we can use that goal or target as a means of evaluating the status of current participatory activity and identifying obstacles and opportunities for improving involvement across all residents, regardless of residency status type. A key aspect of the TPB model is that all predictors work through intentions. Study results suggest that this might not always be the case – attitudes may have both direct and indirect effects on intended and actual behavior.

The second component of TPB suggests that behavioral intentions are based on attitudes as well as social norms and perceptions of control. The relationship between attitudes and behavioral intentions in the literature is tenuous, however. Ajzen (2001) suggests that the relationship is stronger when residents have stronger attitudes, the action is relatively easy to take, residents are in a good mood, and the attitude is accessible at the time of the behavior. Vining and Ebreo (2002) and Heberlein and Black (1976) both argue that attitudes are better predictors of behaviors when at the same scale of measurement. In keeping with the social psychology literature, this study found only a weak attitude-behavior relationship that marginally improved upon increasing issue specificity. Residents who expressed more neutral attitudes were also less likely to take action than those expressing stronger views. Overall, however, results support the premise that general environmental attitudes represent a cognitive system, rather than

serve as effective behavioral predictors, and that other, non-attitudinal variables play a greater role in predicting behavioral intention.

The last chapter in this study addressed out-migration, a small, yet important alternative action residents can take in response to community change in Bear Lake or Star Valley. Non-economic factors, including decreased satisfaction with community conditions, lower levels of place attachment, a rural childhood, and short-term residency, increased the likelihood of voluntary out-migration, while lower annual household income or dependence on the local economy did not appear to place residents at greater risk for forced out-migration in response to rising costs. Current findings cannot discount the potential for additional economic factors to be significant predictors of out-migration behavior, however.

Research Applications to Rural Communities

Direct citizen involvement in bureaucratic decision-making has become increasingly common since the 1960's. Public administrative movements, including new governance and e-governance, have encouraged agencies to work towards improving resident involvement in order to: 1) address biased decision-making based on limited stakeholder participation; 2) improve resident attitudes regarding agency responsiveness and performance; 3) increase public interactions with government; 4) increase public trust in officials; and 5) reduce public cynicism. Other advantages governments can gain from public involvement include gaining decision legitimacy, educating residents, breaking gridlock, avoiding litigation, and improving policy and implementation

decisions (e.g., Berman 1997, Halvorsen 2003, Irvin and Stansbury 2004, Stephan 2005, Tolbert and Mossberger 2006, Wang and Wart 2007, Yang and Callahan, 2007).

Multiple challenges exist for administrators, however, when attempting to meet these goals, including deciding when to involve residents, which participatory activities to utilize, and how to maximize the effectiveness and efficiency of said public involvement efforts. The decision to involve residents is not a clear-cut one; local governments are constantly under competing demands from state and federal agencies, organizations, politicians, as well as powerful local residents or interest groups. Consequently, Yang and Callahan (2007) suggested that governments tend to respond only to those external stakeholders who actively push for involvement, thereby ignoring the issues that matter to the silent majority. Walters et al. (2000) have suggested five main reasons to consider implementing public involvement activities: discovery of issues, education, measurement/assessing opinions or attitudes, persuasion, and legitimization. Irvin and Stansbury (2004) found that citizen participation was most worthwhile if the costs of involvement were low, e.g., volunteers were available, key stakeholders were not geographically dispersed, the community was homogenous, and topics were not technically complex. Participation was also considered worthwhile if it yielded high benefits, e.g., a citizen mandate was required to break issue gridlock, community validation of policies was necessary to overcome high levels of hostility, local community members with high social influence were willing to serve, facilitators had high public credibility, and/or the issue was of high interest to all stakeholders.

Aside from deciding whether to engage in public involvement, leaders must also choose what type of action to take. Several researchers, including Thomas (1990),

Walters et al. (2000), and King et al. (1998), have found that situational specifics such as the level of conflict, number of stakeholders, number of alternatives, quality of decision-making, or level of confidence in information dictate the usefulness of different forms or levels of resident involvement. Fung (2006) argued that there are three components that determine the potential or limitations of participatory forms: who participates, how they communicate and make decisions, and the connection between their conclusions/opinions and public policy and action. He suggested that the choice to include citizens is based on the notion that leaders are deficient in some aspect of decision-making, such as knowledge or resources.

Governments attempt to overcome these deficiencies by using five common participation mechanisms: self-selected involvement, selective recruitment, random recruitment, lay stakeholder engagement, and professional stakeholder engagement. Self-selected involvement is a common, administratively appealing mechanism. However, it frequently yields skewed public representation, favoring residents with greater financial or educational resources, special interests, or stronger views (Fiorina 1999). Specific recruitment, either through selective recruitment of subgroups that are less likely to engage or through random selection, can help improve overall representation of residents (Fishkin 1995, Gastil 2000, Leib 2004, Smith and Wales 2000). Konisky and Beierle (2001) compared the strengths and weaknesses of "new" participatory processes that use recruitment methods (e.g., study circles, citizen juries, round tables). No one method was superior; key strengths for all methods included their deliberative nature, focus on education, and outreach to a wider audience, including atypical residents. The authors warned, however, that these "small size" groups need to be aware of who is not

participating and avoid interest groups as opposed to average citizens. Because they tend to have limited efficacy in influencing government decisions, they may also be best in early public involvement stages.

Lay stakeholders represent volunteers with a deep interest in some issue and the willingness to serve as representatives for other residents who are unwilling or unable to participate. Professional stakeholders are typically paid representatives of organized interests and/or government officials. Effective lay and professional stakeholder group design is dependent on the selection of a representative group of stakeholders, a transparent decision-making process, clear authority in decision-making, competent and unbiased group facilitators, regular meetings, and adequate financial resources (Beierle 1999, Howell et al. 1987, Innes et al. 1994). Yang and Callahan (2007) found that the effectiveness of stakeholder groups is also strongly related to their legitimacy and working relationship with the government, as well as local government participatory values and implementation practicality in terms of resources needed (time, money, expertise), institutional capacity required, and barriers (like lack of trust, unwillingness to give up power/own agenda, poor communication, poor process design).

Fung (2006) also identified three types of communication mechanisms: receiving information and possibly changing participants' perspectives, aggregating preferences into a collective preference, and deliberation and negotiation through a process of interaction and exchange. Rowe and Frewer (2000, 2005) developed this typology further, classifying public participation mechanisms into three groups based on the flow of information: communication, consultation, and participation. Public communication represented forms of top-down information exchange between leaders and residents, such

as television, newspaper, or radio broadcasts, public meetings or hearings, internet, drop-in centers, or hotlines. Although these methods vary as to their selection of residents and what type of information is provided, they often require the public to come to the information and therefore typically yield self-selected participation biased towards those residents most proactive and interested.

Consultation mechanisms represent the reciprocal relationship, providing leaders with opportunities to get resident input on specific questions or issues using opinion polls, referendum surveys, consultation documents, electronic consultation (through interactive websites), focus groups, study circles, or citizen panels. Approaches differ widely in terms of their control over respondents, use of open versus representative access, and quantity versus quality of data gathered. Focus groups, for example, are highly controlled with a strong focus on quality of information received while surveys are also highly controlled but with a strong focus on quantity of data gathered.

Participation mechanisms utilize equal information exchange between residents and are often characterized by controlled selection of participation, unconstrained responses, flexible information input, facilitated discussions, and variable group output. These mechanisms may use decision aids to ensure structured aggregation of all participant opinions and include such activities as action planning workshops, citizen juries, consensus conferences, negotiated rule making, task forces, deliberative opinion polls, or town meetings.

According to Fung (2006), participation types also differ by their level of authority and power. The author argues that there is frequently no expectation by participatory groups that they will change policy. Instead, residents' involvement is

driven by personal benefit or sense of civic duty. Residents can, however, indirectly influence policy by altering or mobilizing public opinion or by providing advice and consultation to leaders. They can also exert direct power, either by working directly with officials or through formal processes such as New England town meetings. The importance of authority and power to group effectiveness may depend on the issue being addressed. Issues related to decision legitimacy tend to require greater inclusiveness and more intensive communication but do not typically require direct authority, while injustice issues require direct authority to be effective and overcome existing hurdles.

Building Public Involvement Opportunities Using Attitude and Behavior Data

For local leaders interested in building public involvement opportunities, building a stronger feedback loop between residents' attitudes, behavior, and governmental decision-making processes can yield several useful outcomes. By understanding residents' attitudes towards aspects of community change and their likelihood of action in response to specific issues, rural community leaders can better predict sensitive or controversial issues, identify likely interested parties and stakeholders, develop educational messages to reshape attitudes, and address gaps in participation by reaching out to a larger, or more atypical, public audience. Similarly, by sharing their thoughts and actions with leaders, residents gain opportunities for increased voice in decision-making processes, stronger trust in local leaders, and greater control over outcomes.

Although implementing public involvement practices to achieve these goals can be challenging, this study's research findings suggest several ways that local leaders can utilize attitude and behavioral intentions data, if they so desire, to facilitate public involvement in Bear Lake or Star Valley issues:

- Recognize shared attitudes and values among residents
- Decide whose voice matters to the decision-making process
- Use behavioral intention data to help identify appropriate methods for public participation activities
- Use behavioral intention data to help identify appropriate audiences for community issues and concerns

Shared Attitudes and Values

In this study, residents shared similar values for property ownership and general attitudes towards several aspects of community change, including the need for agricultural preservation, regulatory control of development, potential for diverse community outcomes, and ambivalence regarding population growth. Even though the statistical relationship between resident attitudes and behavioral intention is typically weak, attitudes can still serve an important role in public involvement efforts: public acknowledgement and discussion of shared attitudes, via local media or other informational venues, can allow residents to come to the participatory "table" with a unified overall goal in mind.

Decide Whose Voice Matters

Previous public administration research (e.g., Yang and Callahon 2007) have suggested that community leaders' attitudes towards public involvement strongly influence the success of said efforts. For this study, interview findings suggest that local leaders and other permanent residents tend to characterize seasonal residents as poorly involved in community issues. This characterization, while also supported by seasonal residents' interviews, may exacerbate non-permanent residents' disinclination for involvement, particularly given that only half of seasonal residents interviewed believe that local officials adequately represent their views. Local leaders have the potential to address this matter by making a decision to actively seek out non-permanent resident involvement in community decisions. This step would set a precedent for all future participatory activities by highlighting residents' expected role in community affairs. Currently, many homeowners' associations' representatives do participate in at least some political activities in the Bear Lake or Star Valley area. Strengthening these political relationships may provide an alternative avenue for seasonal residents to provide a voice in community decisions without requiring additional personal commitment. Stronger leadership support for non-permanent resident participation, if so desired, might also improve residents' sense of efficaciousness and connection to their Bear Lake or Star Valley community, in turn leading to higher levels of involvement.

Identify Appropriate Methods for Involvement

Local leaders have a wide range of participatory forms available to them for use, but each approach has benefits and costs in terms of required resources and intended

outcomes. Group-based activities, such as study circles, open space[15], or citizen panels, are commonly used for issue discovery or assessment of residents' opinions. Their typically small size and self-selected format make them vulnerable to biased results if representation is not equal among participants, however. Based on this study's results, group-based involvement in Bear Lake and Star Valley is strongly oriented towards residents with higher knowledge of community affairs, stronger sense of personal efficacy and altruistic motivation, and sufficient income for participation. Additionally, group-work is more common for LDS-affiliated and long-term residents. Consequently, group outcomes may underrepresent the views of non-LDS or short-term residents, as well as residents without the civic or socioeconomic resources to participate, if not addressed through proactive recruitment measures.

Resident surveys and polls, another consultation technique, provide an efficient, cost-effective method of data collection. In this study, though, response rates were low and, in Bear Lake County, skewed heavily in favor of males over females. A survey conducted in Bear Lake just prior to this study yielded even lower response rates of 10-20 percent (personal communication with Rick Fawcett, 2008). Consequently, while social surveys should yield representative results, leaders should still verify that respondents are typical of overall community socio-demographic characteristics. For this study, the "average" Bear Lake or Star Valley respondent was middle age (50-60), male, married, with household annual income of 60,000 or more, republican, and LDS.

Participatory approaches requiring the public to seek out information, such as public meetings or contacting public officials, have their own strengths and weaknesses.

[15] Open space is defined as large, open access group activities designed to elicit resident comments and feedback regarding community issues or concerns, such as the Bear Lake symposium held in 2007.

Public meetings, in particular, have been criticized for failing to elicit true public influence on policy outcomes and public deliberation regarding community issues, as well as attracting an unrepresentative sample of the population (Adams 2004). This study's findings suggest that residents with stronger local social connections, higher levels of community knowledge, income, and past leadership recruitment experience are all more likely to participate in public meetings. Contacting a public official is also predicted by residents' knowledge of community affairs and past leadership recruitment, as well as higher levels of altruistic motivation.

As with group-based activity, because these approaches often are open-access and self-selected, potentially biased outcomes are possible if representation is not equal across stakeholder groups. Leaders attending public meetings, for example, only hear residents with the ability, knowledge, and/or social connections to come to meetings. If the goal of these approaches is to share messages and influence residents' attitudes, then the exclusion of significant portions of the community for both participatory types suggests that these approaches may not be achieving their desired outcome. Furthermore, in this setting low attendance or input levels may also be mistaken for apathy or silent acceptance of the status quo, rather than a result of the structure of the participatory activity.

Identify Appropriate Audiences

As stated previously, local governments are constantly under competing demands from external interests and tend to respond only to those external stakeholders who actively push for involvement, thereby ignoring the issues that matter to the silent

majority. Taking a more rigorous look at who is currently interested or not interested in local issues can provide several benefits to leaders, however. First, since we know that all issues are not of equal interest or relevance to all residents, exploring predictors of issue relevance can allow leaders to identify the right stakeholders for the right issues, leading to a more efficient use of time and resources when conducting participatory efforts. For example, this study's findings suggests that school closures are more relevant to local residents who may have strong social and emotional ties to the community, LDS affiliation, and high knowledge of community affairs but possess lower civic skills, such as stay-at-home moms. Local leaders can use these data to target appropriate audiences when designing participatory activities.

The same results, however, can also point out who is not participating. If there is lower involvement by disadvantaged residents, leaders may need to work to address participatory inequalities through active recruitment or use of a different involvement mechanism. This study found that residents with lower levels of knowledge, place attachment, and lower social connections are generally less likely to get involved in community affairs. Leaders can address lack of knowledge through improved communication flow and encourage social network development and opportunities for interaction through better community planning (e.g., sidewalks, integrated seasonal and permanent resident and mixed income housing), community events, recreation and social centers, or other activities. Place attachment may be improved through increased administrative responsiveness, in addition to greater social connectivity and maintaining important quality of life characteristics (such as recreation experience or rural nature of area). Other actions community leaders can take to offset low involvement by subgroups

include training and skills development to enhance civic skills and personal efficacy and highlighting the altruistic aspects of involvement (e.g., how it will benefit the community or environment as a whole). Since financial costs are also often significant deterrents for resident involvement, leaders also need to be aware of the impacts of different participatory approaches on resident resource requirements and seek ways to reduce their impacts. Use of online, interactive websites to gather information, for example, may lower time and financial costs relative to on-site meetings for non-permanent residents and therefore encourage higher levels of public involvement.

Study Limitations and Future Research Needs

Because this study only evaluated two areas in the Rocky Mountain West, results cannot be generalized to all rural communities in the region. Generalizability may also be limited due to possible response bias in survey respondents. More significantly, model results consistently yielded low R^2 values and predictive power throughout the study, suggesting a need for model improvement. While lack of significance may, in part, be explained by commonly shared demographic characteristics, such as religion or political orientation, this does not resolve all issues of poor model fit. Although major independent and dependent variables were chosen *a priori* based on previous literature findings, it is clear that in this study these variables were not sufficient to capture the variability in respondents' survey answers. Results should, therefore, be cautiously accepted until future research can provide additional support or improvement.

This study also highlighted several other key future research needs. Additional work is needed to clarify resident acceptability of trade-offs for specific management

goals or actions. Studies at this micro-level are rare but important for highlighting conflict potential that would be masked using a more general assessment technique. Robbins et al. (2008) provide one means of accomplishing this task: the authors developed an interactive web survey that allowed residents to apportion their bill across 24 different services, yielding individual willingness to pay results.

Study findings also suggest that residency status may not be the most effective predictor of resident attitudes and behavior with regard to community change. Considering the minimal differences that emerged in this research project, researchers may want to think of other ways to classify or analyze residents. Possible reclassification efforts could include the interaction of length of residence and residency status or distinguishing residents based on their "fit" with the local community, e.g., residents with shared values, attitudes, or religious orientation from residents with distinctively different socioeconomic, cultural/religious, or social-psychological profiles. Additional work developing attitude and participatory behavior linkages would also be beneficial, providing valuable information to local leaders by highlighting when residents might react to decisions and policies that threaten their views by taking action in their community. Research could also aid in understanding the factors influencing respondents' decisions to leave their community. Given the relatively small size of this study's population, qualitative efforts may yield a more nuanced understanding of resident behavior and help to answer research questions regarding who is moving out, why, and what the ramifications are for community leaders seeking to manage growth while maintaining quality of life and adequate economic conditions.

REFERENCES

Abowitz, D. A. 1990. Sociopolitical participation and the significance of social context: A model of competing interests and obligations. *Social Science Quarterly* 71(3):543-566.

Adams, B. 2004. Public meetings and the democratic process. *Public Administration Review* 64(1):43-54.

Agresti, A. and B. Finlay. 1997. *Statistical methods for the social sciences*. 3rd ed. Upper Saddle River, NJ: Prentice Hall.

Ajzen, I. 1988. *Attitudes, personality, and behavior*. Chicago: Dorsey.

Ajzen, I. 1989. Attitude structure and behavior. In *Attitude structure and function*, eds. A. Pratkanis, S. Breckler, and A. Greenwad, 241-274. Hillsdale, NJ: Lawrence Erlbaum.

Ajzen, I. 1991. The theory of planned behavior. *Organizational Behavior & Human Decision Processes* 50:179-211.

Ajzen, I. 2001. Nature and operation of attitudes. *Annual Review of Psychology* 52:27-58.

Ajzen, I., T. Brown, and F. Carvajal. 2004. Explaining the discrepancy between intentions and actions: The case of hypothetical bias in contingent valuation. *Personality and Social Psychology Bulletin* 30(9):1108-1121.

Albrecht, S., K. Finsterbusch, W. Freudenburg, R. Gale, R. Gold, S. Murdock, and F. Leistritz. 1982. Local social disruption and western energy development: Commentary. *The Pacific Sociological Review* 25(3):297-366.

Almond, G.A. and S. Verba. 1963. *The civic culture: Political attitudes and democracy in five nations.* Princeton, NJ: Princeton University Press.

Andereck, K., K. Valentine, R. Knopf, and C. Vogt. 2005. Residents' perceptions of community tourism impacts. *Annals of Tourism Research* 32(4):1056-1076.

Armitage, C. and M. Conner. 2001. Efficacy of the theory of planned behaviour: A meta-analytic review. *British Journal of Social Psychology* 40:471–499.

Babbie, E. 1989. *The practice of social research*. 5th ed. Belmont, CA: Wadsworth Publishing Company.

Barcus, H. 2004. Urban-rural migration in the USA: An analysis of residential satisfaction. *Regional Studies* 38(6):643-657.

Becker, P. E. and P. H. Dhingra. 2001. Religious involvement and volunteering: Implications for civil society. *Sociology of Religion* 62(3):315-335.

Beierle, T. 1999. Using social goals to evaluate public participation in environmental decisions. *Policy Studies Review* 16(3/4):75–103.

Bell D., T. Gray, and C. Haggett. 2005. The 'social gap' in wind farm siting decisions: Explanations and policy responses. *Environmental Politics* 14(4):460-477.

Berman, E. 1997. Dealing with cynical citizens. *Public Administration Review* 57(2):105 – 112.

Beyers, W. and P. Nelson. 2000. Contemporary development forces in the neometropolitan west. *Journal of Rural Studies* 16:459-474.

Bickman, L. and D. Rog. 1998. *Handbook of applied social research methods*. Thousand Oaks, CA: Sage Publications.

Binstock, R. H. 2006. Older people and political engagement: From avid voters to 'cooled-out marks'. *Generations* 30(4):24-30.

Blahna, D. 1990. Social bases for resource conflicts in areas of reverse migration. In *Community and Forestry: Continuities in the Sociology of Natural Resources,* eds. R. G. Lee, D. R. Field, and W. R. Burch, Jr., 159-178. Boulder, CO: Westview Press.

Boeckman, R. and T. Tyler. 2002. Trust, respect, and the psychology of political engagement. *Journal of Applied Social Psychology* 32(10):2067-2088.

Booth, D. 1999. Spatial patterns in the economic development of the Mountain West. *Growth and Change* 30:384-405.

Bourke, L. 1994. Economic attitudes and responses to siting hazardous waste facilities in rural Utah. *Rural Sociology* 59(3):485-496.

Brady, H., S. Verba, and K. Schlozman. 1995. Beyond SES: A resource model of political participation. *The American Political Science Review* 89(2):271-294.

Brady, H., S. Verba, and K. Schlozman. 1999. Prospecting for participants: Rational expectations and recruitment of political activists. *The American Political Science Review* 93(1):153-168.

Brehm, J. and B. Eisenhauer. 2006. Environmental concern in the Mormon culture region. *Society and Natural Resources* 19(5):393-410.

Brehm, J., B. Eisenhauer, and R. Krannich. 2006. Community attachments as predictors of local environmental concern: The case for multiple dimensions of attachment. *American Behavioral Scientist* 50(2):142-165.

Brehm, J. and W. Rahn. 1997. Individual-level evidence for the causes and consequences of social capital. *American Journal of Political Science* 41(3):999-1023.

Brown, D., K. Johnson, T. Loveland, and D. Theobald. 2005a. Rural land-use trends in the coterminous United States, 1950-2000. *Ecological Applications* 15(6):1951-1863.

Brown, R., S. Dorius, and R. Krannich. 2005b. The boom-bust-recovery cycle: Dynamics of change in community satisfaction and social integration in Delta, Utah. *Rural Sociology* 70(1):28- 49.

Butterfoss, F. D. 1993. *Coalitions for alcohol and other drug abuse: Factors predicting effectiveness*. Unpublished doctoral dissertation, University of South Carolina, Columbia.

Campbell, A. L. 2002. Self-Interest, social security, and the distinctive participation patterns of senior citizens. *American Political Science Review* 96(3): 565-574.

Campbell, D. 2004. Acts of faith: Churches and political engagement. *Political Behavior* 26(2):155-180.

Cardinal, R. and M. Aitken. 2005. *ANOVA for the behavioral science researcher*. Mahwah, NJ: Lawrence Erlbaum Associates.

Carmines, E. 1991. Psychological antecedents of adolescent political involvement: Personal competence and political behavior. *International Journal of Adolescence and Youth* 3: 79–98.

Carruthers, J. and A. Vias. 2005. Urban, suburban, and exurban sprawl in the Rocky Mountain West: Evidence from regional adjustment models. *Journal of Regional Science* 45(1):21-48.

Cawley, R. M. 1993. *Federal land. western anger: The sagebrush rebellion and environmental politics.* Lawrence: University of Kansas Press.

Chavis, D., J. Hogge, D. McMillan, and A. Wandersman. 1986. Sense of community through Brunswick's lens: A first look. *Journal of Community Psychology* 14(1):24–40.

Cho, S., D. Newman, and D. Wear. 2003. Impacts of second home development on housing prices in the Southern Appalachian Highlands. *RUDS* 15(3):208-225.

Chwe, M. 1999. Structure and strategy in collective action. *The American Journal of Sociology* 105(1):128-156.

Clark, D. and W. Hunter. 1992. The impact of economic opportunity, amenities, and fiscal factors on age-specific migration rates. *Journal of Regional Science* 32(2):349-365.

Clark, P. B. and J. Wilson. 1961. Incentive systems: A theory of organizations. *Administrative Science Quarterly* 6:129-166.

Clendenning, G. 2004. *Seasonal homeowners, community change, and natural resources management in the amenity rich exurbs of the Wisconsin Pine Barrens*. Unpublished doctoral dissertation, Department of Forestry, University of Wisconsin, Madison.

Clendenning, G., D. Field, and K. Kapp. 2005. A comparison of seasonal homeowners and permanent residents on their attitudes towards wildlife management on public lands. *Human Dimensions of Wildlife* 10:3-17.

Cockerham, W. and A. Belvins, Jr. 1977. Attitudes towards land-use planning and controlled population growth in Jackson Hole. *Journal of the Community Development Society* 8(1):62-73.

Cohen, A., E. Vigoda, and A. Samorty. 2001. Analysis of the mediating effect of personal–psychological variables on the relationship between socioeconomic status and political participation: A structural equations framework. *Political Psychology* 22:727–757.

Connelly, N. and T. Brown. 2001. Conserving the landscape of Silver Lake Township: A survey of landowners. HDRU Series No. 01-12. Ithaca, NY: Department of Natural Resources, Cornell University.

Custer, J. B., and D. J. Blahna. 2000. A preliminary analysis of attachment to special places among community residents in Northern Michigan. In *The Third Symposium on Social Aspects and Recreation Research*, eds. Schneider et al., 675-682. Tempe, AZ: Arizona State University.

Dahms, F. and J. McComb. 1999. 'Counterurbanization', interaction, and functional change in a rural amenity area – a Canadian example. *Journal of Rural Studies* 15(2):129-146.

Davidson, W. B. and P. R. Cotter. 1989. Sense of community and political participation. *Journal of Community Psychology* 17(2):119-125.

Deller, S., T. Tsai, D. Marcouiller, and D. English. 2001. The role of amenities and quality of life in rural economic growth. *American Journal of Agricultural Economics* 83(2): 352-365.

Deutscher, I. 1966. Words and deeds: Social science and social policy. *Social Problems* 13: 235-254.

Diaz, D. and G. Green. 2001. Growth management and agriculture: An examination of local efforts to manage growth and preserve farmland in Wisconsin cities, villages, and towns. *Rural Sociology* 66(3):317-341.

Dillman, D. 2000. *Mail and internet surveys: The tailored design method*. 2nd ed. New York: John Wiley and Sons.

Docherty, I., R. Goodlad, and R. Paddison. 2001. Civic culture, community, and citizen participation in contrasting neighborhoods. *Urban Studies* 38(12):2225-2250.

Dunlap, R. 1991. Public opinion in the 1980s: Clear consensus: Ambiguous comment. *Environment* 33(8):10-37.

Dyck, J. and J. Gimpel. 2005. Distance, turnout, and the convenience of voting. *Social Science Quarterly* 86(3):531-548.

Eagly, A. and S. Chaiken. 1993. *The psychology of attitudes*. New York: Harcourt Brace Jovanovich.

Eggins, R. K., J. Reynolds, P. Oakes, and K. Mavor. 2007. Citizen participation in a deliberative poll: Factors predicting attitude change and political engagement. *Australian Journal of Psychology* 59(2):94-100.

English, D., D. Marcouiller, and H. Cordell. 2000. Tourism dependence in rural America: Estimates and effects. *Society and Natural Resources* 13: 85-202.

Eser, S. and A. Luloff. 2003. Community controversy over a proposed limestone quarry. *Society and Natural Resources* 16:793-806.

Fazio, R. 1989. On the power and functionality of attitudes: The role of attitude accessibility. In *Attitude Strength and Function,* eds. A. R. Pratkanis, S. J. Breckler, and A. G. Greenwald, 153–179. Hillsdale, NJ: Lawrence Erlbaum Associates.

Festinger, L. 1957. *A theory of cognitive dissonance.* Palo Alto, CA: Stanford University Press.

Finch, H. 2005. Comparison of distance measures in cluster analysis with dichotomous data. *Journal of Data Science* 3:85-100

Finifter, A. 1970. Dimensions of political alienation. *American Political Science Review* 64:389-410.

Fiorina, M. 1999. Extreme Voices: A Dark Side of Civic Engagement. In *Civic engagement in American democracy*, eds. T. Skocpol and M. Fiorina, 395-426. Washington, DC: Brookings Institution Press.

Fishkin, J. 1995. *The voice of the people: Public opinion and democracy.* New Haven, CT: Yale University Press.

Flora, J. 1998. Social capital and communities of place. *Rural Sociology* 63(4):481-506.

Fortmann, L. and J. Kusel. 1990. New voices, old beliefs: forest environmentalism among new and long-standing rural residents. *Rural Sociology* 55(2):214-232.

Fowler, J. and C. Kam. 2007. Beyond the self: Social identity, altruism, and political participation. *The Journal of Politics* 69(3):813-827.

Fox, J. 1991. *Regression diagnostics*. Quantitative Applications in the Social Sciences Series No. 79. Thousand Oaks, CA: Sage Publications.

Frentz, I., F. Farmer, J. Guldin, and K. Smith. 2004. Public lands and population growth. *Society and Natural Resources* 17:57-68.

Freudenburg, W. 1982. The impacts of rapid growth on the social and personal wellbeing of local residents. In *Coping with rapid growth in rural communities*, eds. B. Weber and R. Howell, 137-170. Boulder CO: Westview Press.

Freudenburg, W. and R. Gramling. 1994. Natural resources and rural poverty: A closer look. *Society and Natural Resources* 7:5-22.

Freudenburg, W. and S. Pastor. 1992. NIMBYs and LULUs: Stalking the syndromes. *Journal of Social Issues* 48(4):39-61.

Friedmann, R., P. Florin, A. Wandersman, and R. Meier. 1988. Local action on behalf of local collectives in the U.S. and Israel: How different are leaders from members in voluntary associations? *Journal of Voluntary Action Research* 17:36-54.

Fung, A. 2006. Varieties of participation in complex governance. *Public Administration Review* 66:66-75.

Furuseth, O. 1987. Public attitudes towards local farmland protection programs. *Growth and Change* 18(3):49-62.

Gamson, W. 1968. *Power and discontent.* Homewood, IL: Dorsey.

Gamson, W. 1975. Political trust and its ramifications. In *Social psychology and political behavior: Problems and prospects*, eds. G. Soule and J. Soule, 40-55. Columbus, OH: Merrill.

Gastil , J. 2000. *By popular demand: Revitalizing representative democracy through deliberative elections*. Berkeley: University of California Press.

Gibson, C., R. Dufty, and D. Drozdzewski. 2005. Resident attitudes to farmland protection measures in the North Rivers Region, New South Wales. *Australian Geographer* 36(3): 369-383.

Glaser, B. and A. Strauss. 1967. *The discovery of grounded theory: Strategies for qualitative research.* Chicago: Aldine Publishing Co..

Gober, P., K. McHugh, and D. Leclerc. 1993. Job-rich but housing poor: The dilemma of a Western amenity town. *Professional Geographer* 45(1):12-20.

Gorard, S. 2003. *Quantitative methods in social science*. New York: Continuum.

Graber, E. 1974. Newcomers and oldtimers: Growth and change in a mountain town. *Rural Sociology* 39(4):5004-513.

Green, G., D. Marcouiller, S. Deller, D. Erkkila, and N. Sumathi. 1996. Local dependency, land use attitudes, and economic development: Comparisons between seasonal and permanent residents. *Rural Sociology* 61(3):427-445.

Greider, T. and R. Krannich. 1985. Neighboring patterns, social support, and rapid growth: A comparative analysis from three Western communities. *Sociological Perspectives* 28: 51-70.

Greider, T. and R. Little. 1988. Social action and social impacts: Subjective interpretation of environmental change. *Society and Natural Resources* 1:45-55.

Greve, M. 1994. What are the issues? In *Private property rights and responsibilities of rangeland owners and managers,* ed. L. D. White, 3-7. Workshop proceedings, 23-25 October, Austin, TX.

Halseth, G. 1998. *Cottage County in transition*. Montreal: McGill-Queen's University Press.

Halvorsen, K. 2003. Assessing the effects of public participation. *Public Administration Review* 63(5):535-543.

Hansen, A., R. Rasker, B. Maxwell, J. Rotella, J. Johnson, A. Parmenter, U. Langner, W. Cohen, R. Lawrence, and M. Kraska. 2002. Ecological causes and consequences of demographic change in the new west. *BioScience* 52(2):151-62.

Harvey, T. and M. Works. 2002. Urban sprawl and rural landscapes: Perceptions of landscape as amenity in Portland, Oregon. *Local Environment* 7(4):381-396.

Hays, R. and A. Kogl. 2007. Neighborhood attachment, social capital building, and political participation: A case study of low- and moderate-income residents of Waterloo, Iowa. *Journal of Urban Affairs* 29(2):181-205.

Heberlein, T. and J. Black. 1975. Attitudinal specificity and the prediction of behavior in a field setting. *Journal of Personality and Social Psychology* 33(4): 474-479.

Howell, R., M. Olsen, and D. Olsen. 1987. *Designing a citizen involvement program: A guidebook for involving citizens in the resolution of environmental issues*. Corvallis, OR: Western Rural Development Center.

Humphrey, C. 1993. Theories in the study of natural resource dependent communities and persistent rural poverty in the United States. *Rural Sociology Task Force on Persistent Rural Poverty*: 136-172.

Humphrey, C. 2001. Disarming the war of the growth machines: A panel study. *Sociological Forum* 16(1):99-121.

Hunter, L., J. Boardman, and J. Saint Onge. 2005. The association between natural amenities, rural population growth, and long term residents' economic well-being. *Rural Sociology* 70(4):452-469.

Hunter, L., R. Krannich, and M. Smith. 2002. Rural migration, rapid growth, and fear of crime. *Rural Sociology* 67(1):71-89.

Hunter, L. and M. Tooney. 2005. Religion and attitudes towards the environment: A comparison of Mormons and the general U.S. public. *The Social Science Journal* 42(1):25-38.

Ikeda, K., T. Kobayashi, and M. Hosjimoto. 2008. Does political participation make a difference? The relationship between political choice, civic engagement, and political efficacy. *Electoral Studies* 27:77-88.

Ikeda, K. and S. Richey. 2005. Japanese network capital: The impact of social networks on Japanese political participation. *Political Behavior* 27(3):239-260.

Inman, K. and D. McLeod. 2002. Property rights and public interests: A Wyoming agricultural lands study. *Growth and Change* 90:91-114.

Innes, J., J. Gruber, M. Neuman, and R. Thompson. 1994. Coordinating growth and environmental management through consensus building. Berkeley: California Policy Seminar.

Irvin, R. and J. Stansbury. 2004. Citizen participation in decision making: Is it worth the effort? *Public Administration Review* 64(1):55-65.

Jackson-Smith, D., E. Jensen, and B. Jennings. 2005a. Changing land use in the rural, intermountain West. In *Population Change and Rural Society*, eds. W. Kandel and D. Brown, 253-276. Dordrecht: Springer.

Jackson-Smith, D., U. Kreuter, and R. Krannich. 2005b. Understanding the multidimensionality of property rights orientations: Evidence from Utah and Texas ranchers. *Society and Natural Resources* 18(7):587-610.

Jennings, M. and G. Markus. 1988. Political involvement in the later years: A longitudinal study. *American Journal of Political Science* 32(2):302-317.

Jobes, P. 1995. Migration in the West: A Gallatin Valley, Montana case study. *Western Planner* (Apr./May):10-13.

Kanagy, C. and F. Willits. 1993. A greening of religion? Some evidence from a Pennsylvania sample. *Social Science Quarterly* 74(3):675-683.

Kaplan, M. 1986. Cooperation and coalition development among neighborhood organizations: A case study. *Journal of Voluntary Action Research* 15(4):23-34.

Kim, J. 1975. Multivariate analysis of ordinal variables. *American Journal of Sociology* 81: 261-298.

King, C., K. Feltey, and B. Susel. 1998. The question of participation: Toward authentic public participation in public administration. *Public Administration Review* 58(4):317–326.

Klandersman, B. 2002. How group identification helps overcome the dilemma of collective action. *American Behavioral Scientist* 45(5):887-900.

Kline, J. 2006. Public demand for preserving local open space. *Society and Natural Resources* 19:645-659.

Knapp, T. and P. Graves. 1989. On the role of amenities in models of migration and regional development. *Journal of Regional Science* 29(1):71-87.

Knoke, D. 1988. Incentives in collective action organizations. *American Sociological Review* 53:311-329.

Konisky, D. and T. Beierle. 2001. Innovations in public participation and environmental decision making: Examples from the Great Lakes Region. *Society and Natural Resources* 14(9):815–826.

Krannich, R. and S. Albrecht. 1995. Opportunity-threat responses to nuclear waste-disposal facilities. *Rural Sociology* 60(3):435-453.

Krannich, R., T. Greider, and R. Little. 1986a. *Perceptions of community conditions and local change in Evanston, Wyoming, 1982-1984.* Logan: Utah State University Press.

Krannich, R., T. Greider, and R. Little. 1986b. *Perceptions of community conditions and local change in Vernal, Utah, 1982-1984.* Logan: Utah State University Press.

Krannich, R. and C. Humphrey. 1983. Local mobilization and community growth: Toward an assessment of the 'growth machine' hypothesis. *Rural Sociology* 48:60-81.

Krannich, R. and A. Luloff. 1991. Problems of resource dependency in US rural communities. *Progress in Rural Policy and Planning* 1:5-17.

Kwang-Koo, K., D. Marcouiller, and S. Deller. 2005. Natural amenities and rural development: Understanding spatial and distributional attributes. *Growth and Change* 36(2):273-297.

Labovitz, S. 1967. Some observations on measurement and statistics. *Social Forces* 46:151-160.

Labovitz, S. 1970. The assignment of numbers to rank order categories. *American Sociological Review* 35:515-524.

Leib, E. 2004. *Deliberative democracy in America: A proposal for a popular branch of government*. University Park: Penn State University Press.

Levi, M. and L. Stoker. 2000. Political trust and trustworthiness. *Annual Review of Political Science* 3(1): 475.

Logan, J. and H. Molotch. 1987. *Urban fortunes.* Berkeley: University of California Press.

Lowndes, V. 2004. Getting On or Getting By? Women, Social Capital and Political Participation. *British Journal of Politics & International Relations* 6(1): 45-64.

Lyon, L., L. Felice, and M. Perryman. 1981. Community power and population increase: An empirical test of the growth machine model. *American Journal of Sociology* 86: 1387-1400.

Marcouiller, D., G. Green, S. Deller, and N. Sumathi. 1996. Recreational homes and regional development: A case study from the Upper Great Lakes states. Madison, WI: Wisconsin County Extension Publication No. G3651.

Marquart-Pyatt, S. and P. Petrzelka. 2006. *Cache not cash! Trust, the democratic process, and involvement in a rural society.* Unpublished manuscript. Department of Sociology, Social Work and Anthropology, Utah State University.

McBeth, M. K. and R. H. Foster. 1994. Rural Environmental Attitudes. *Environmental Management* 18(3):401-411.

McClurg, S. 2003. Social networks and political participation: The role of social interaction in explaining political participation. *Political Research Quarterly* 56(4):449-464.

McCluskey, M, S. Deshpande, and D. Shah. 2004. The efficacy gap and political participation: When political influence fails to meet expectations. *International Journal of Public Opinion Research* 16(4):438-455.

McFarlane, B. and L. Hunt. 2006. Environmental activism in the forest sector - social psychological, social-cultural, and contextual effects. *Environment and Behavior* 38 (2):266-285.

McGranahan, D. 1984. Local growth and the outside contacts of the influential: An alternative test of the 'growth machine' hypothesis. *Rural Sociology* 49:530-540.

McGranahan, D. 1999. Natural amenities drive rural population change. ERS-781, U.S. Department of Agriculture. Washington, DC: U.S Government Printing Office.

McLeod, J., C. Daily, W. Eveland, J. Bayer, S. Yang, and S. Wang. 1996. Community integration, local media use, and democratic processes. *Communication Research* 23: 179–209.

McLeod, J., D. Scheufele, and P. Moy. 1999. Community, communication, and participation: The role of mass media and interpersonal discussion in local political participation. *Political Communication* 16:315–336.

Menard, S. 2002. *Applied logistic regression analysis*. 2nd ed. Series: Quantitative Applications in the Social Sciences, No. 106. Thousand Oaks, CA: Sage Publications.

Mohai, P. 1985. Public concern and elite involvement in environmental-conservation issues. *Social Science Quarterly* 66(4):820-838.

Mohatt, G., K. Hazel, J. Allen, M. Stachelrodt, C. Hensel, and R. Fath. 2004. Unheard Alaska: Culturally anchored participatory action research on sobriety with Alaskan natives. *American Journal of Community Psychology* 33(3/4):263-273.

Molotch, H. 1976. The city as a growth machine. *American Journal of Sociology* 82:309-332.

Mottiar, Z. and B. Quinn. 2003. Shaping leisure/tourism places – the role of holiday homeowners: A case study of Courtown, Co., Wexford, Ireland. *Leisure Studies* 22: 109-127.

Mutz, D. 2002. The consequences of cross-cutting networks for political participation. *American Journal of Political Science* 46(4):838.

Nelson, P. 1997. Migration, sources of income, and community change in the nonmetropolitan Northwest. *Professional Geographer* 49(4):418-430.

Nelson, P. and W. Beyers. 1998. Using economic base models to explain new trends in rural income. *Growth and Change* 29:295-318.

Nelson, P. and A. Sewell. 2003. Regional comparisons of metropolitan and nonmetropolitan migration in the 1970s and 1980s: Age and place implications. *Professional Geographer* 55(1):83-99.

Nie, N., J. Junn, and K. Stehlik-Barry. 1996. *Education and democratic citizenship in America*. Chicago: University of Chicago Press.

Nie, N., S. Verba, and J. Kim. 1974. Political participation and the lifecycle. *Comparative Politics* 6(3):319-340.

Nir, L. 2005. Ambivalent social networks and their consequences for participation. *International Journal of Public Opinion Research* 17(4):422-442.

Nord, M. 1994. Natural resources and persistent rural poverty: In search of the nexus. *Society and Natural Resources* 7:205-220.

Norris, P. 1999. *Critical citizens: Global support for democratic governance*. Oxford: Oxford University Press.

Nunnaly, J. 1978. *Psychometric theory*. New York: McGraw-Hill.

Ohman, D. 1999. Restructuring and well-being in the non-metropolitan Pacific Northwest. *Growth and Change* 30(2):161-183.

Paek, H., S. Yoonm, and D. Shah. 2005. Local news, social integration, and community participation: Hierarchical linear modeling of contextual and cross-level effects. *Journalism and Mass Communication Quarterly* 82(3):587-606.

Parisi, D., M. Taqunio, S. Grice, and D. Gill. 2004. Civic responsibility and the environment: Local conditions to community environmental activeness. *Society and Natural Resources* 17:97-112.

Payton, M., D. Fulton, and D. Anderson. 2005. Influence of place attachment and trust on civic action: A study at Sherburne National Wildlife Refuge. *Society and Natural Resources* 18: 511-528.

Petrzelka, P., R. Krannich, and J. Brehm. 2006. Identification with resource-based occupations and desire for tourism: Are the two necessarily inconsistent? *Society and Natural Resources* 19:693-707.

Price, M. and D. Clay. 1980. Structural disturbances in rural communities: Some repercussions of the migration turnaround in Michigan. *Rural Sociology* 45(4):591-607.

Rasker, R. 2006. An exploration into the economic impact of industrial development versus conservation on Western public lands. *Society and Natural Resources* 19:191-207.

Raudenbush, S. and A. Bryk. 2001. *Hierarchical linear models: Applications and aata analysis methods* (Advanced Quantitative Techniques in the Social Sciences). Thousand Oaks, CA: Sage Publications.

Robbins, M., B. Simonsen, and B. Feldman. 2008. Citizens and resource allocation: Improving decision making with interactive web-based citizen participation. *Public Administration Review* 68:564-575.

Rogers, E. 1995. *Diffusion of innovations*. 4th ed. New York: Free Press.

Rosenberger, R. and J. Loomis. 1999. The value of ranch open space to tourists: Combining observed and contingent behavior data. *Growth and Change* 30:366-383.

Rosenstone, S. and J. Hansen. 1993. *Mobilization, participation, and democracy in America*. New York: MacMillian.

Rowe, G. and L. Frewer. 2000. Public participation methods: A framework for evaluation. *Science Technology Human Values* 25(1):3-29.

Rowe, G. and L. Frewer. 2005. A typology of public engagement mechanisms. *Science Technology Human Values* 30(2):251-290.

Rudzitis, G. 1999. Amenities increasingly draw people to the rural west. *Rural Development Perspective* 14(2):9–13.

Ryan, V., K. Agnitsch, L. Zhao, and R. Mullich. 2005. Making sense of voluntary participation: A theoretical synthesis. *Rural Sociology* 70(3):287-313.

Sampson, R. and W. Groves. 1989. Community structure and crime: Testing social disorganization theory. *American Journal of Sociology* 94(4):774-802.

Sayre, N. 2004. Viewpoint: The need for qualitative research to understand ranch management. *Journal of Range Management* 57:668-674.

Scheufele, D. 2000. Talk or conversation? Dimensions of interpersonal discussion and their implications for participatory democracy. *Journalism & Mass Communication Quarterly* 77:727–743.

Scheufele, D. and W. Eveland, Jr. 2001. Perceptions of ''public opinion'' and ''public'' opinion expression. *International Journal of Public Opinion Research* 13:25–44.

Scheufele, D., M. Nisbet, D. Brossard, and E. Nisbet. 2004. Social structure and citizenship: Examining the impacts of social setting, network heterogeneity and informational variables on political participation. *Political Communication* 21:315–338.

Schlapfer, F. and N. Hanley. 2003. Do local landscape patterns affect the demand for landscape amenity protection*?* *Journal of Agricultural Economics* 54(1):21-34.

Schlozman, K., N. Burns, and S. Verba. 1994. Gender and the pathways to participation: The role of resources. *The Journal of Politics* 56(4):963-990.

Schlozman, K., S. Verba, and H. Brady. 1995. Participation's not a paradox: The view from American activists. *British Journal of Political Science* 25(1):1-36.

Seydlitz, R., S. Laska, D. Spain, E. Triche, and K. Bishop. 1993. Development and social problems: The impact of the offshore oil industry on suicide and homicide rates. *Rural Sociology* 58(1):93.

Shah, D. 1998. Civic engagement, interpersonal trust, and television use: An individual-level assessment of social capital. *Political Psychology* 19:469-496.

Sherkat, D. E. and C. G. Ellison. 2007. Structuring the religion-environment connection: Identifying religious influences on environmental concern and activism. *Journal for the Scientific Study of Religion* 46(1):71-85.

Shumway, J. and S. Otterstrom. 2001. Spatial patterns of migration and income change in the Mountain West: The dominance of service-based, amenity-rich counties. *Professional Geographer* 53(4):492-502.

Smith, D. 1997. *Environment, development, and land use attitude differences between newcomers and longer-term residents of high-amenity rural communities in the Rocky Mountain West.* Unpublished doctoral dissertation, Utah State University, Logan.

Smith, G. and C. Wales . 2000 . Citizens' juries and deliberative democracy. *Political Studies* 48(1):51-65.

Smith, M. and R. Krannich. 1998. Tourism dependence and resident attitudes. *Annals of Tourism Research* 25(4):783-802.

Smith, M. and R. Krannich. 2000. Culture Clash revisited: Newcomer and longer-term residents' attitudes toward land use, development, and environmental issues in rural communities in the Rocky Mountain West. *Rural Sociology* 65(3):396-421.

Smith, M., R. Krannich, and L. Hunter. 2001. Growth, decline, stability, and disruption. *Rural Sociology* 66(3): 425-450.

Smutny, G. 2002. Patterns of growth and change. *Professional Geographer* 53(4):438-45.

Sofranko A. and J. Williams. 1980. *Rebirth in rural America: Rural migration in the midwest*. Ames, IA: North Central Regional Center for Rural Development.

Spies, S., S. Murdock, S. White, R. Krannich, J. Wulfhorst, K. Wrigley, F. Leistritz, R. Sell, and J. Thompson. 1998. Support for waste facility siting: Differences between community leaders and residents. *Rural Sociology* 63(1):65-93.

Stedman, R. and R. Hammer. 2006. Environmental perception in a rapidly growing amenity-rich region: The effects of lakeshore development on perceived water quality in Vilas County, Wisconsin. *Society and Natural Resources* 19:137-151.

Steelman, T. and J. Carmin. 1998. Common property, collective interests, and community opposition to locally unwanted land uses. *Society & Natural Resources* 11(5):485-505.

Steelman, T., G. Kunkel, and D. Bell. 2004. Federal and state influence on community responses to wildfire threats: Arizona, Colorado, and New Mexico. *Journal of Forestry* 102(6):21-27.

Steinbach, M., L. Ertoz, and V. Kumar. 2004. The challenges of clustering high dimensional data. In *New Vistas in Statistical Physics – Applications in Econophysics, Bioinformatics, and Pattern Recognition*. New York: Springer-Verlag.

Stephan, M. 2005. Democracy in our backyards: A study of community involvement in administrative decision making. *Environment and Behavior* 37:662-682.

Sutton, P. and F. Day. 2004. Types of rapidly growing counties of the U.S., 1970-1990. *The Social Science Journal* 41:251-265.

Tarrant, M. and G. Green. 1999. Outdoor recreation and the predictive validity of environmental attitudes. *Leisure Studies* 21: 17-30.

Tashakkori, A. and C. Teddlie. 2003. *Handbook of mixed methods in social and behavioral research.* Thousand Oaks, CA: Sage Publications.

Taylor, D. and S. Lieske. 2002. *Second home growth in Wyoming, 1990-2000.* Laramie: University of Wyoming, Extension Publication B-1120.

Taylor, J. 2004. The many lives of the New West. *The Western Historical Quarterly* 35(2).

Theodori, G., A. Luloff, and F. Willits. 1998. The association of outdoor recreation and environmental concern: Re-examining the Dunlap-Heffernan thesis. *Rural Sociology* 63:94-108.

Thomas, J. 1990. Public involvement in public management: Adapting and testing a borrowed theory. *Public Administration Review* 50:435-445.

Thompson, J. and A. Blevins. 1983. Attitudes towards energy development in the Northern Great Plains. *Rural Sociology* 48(1):148-158.

Tolbert, C., M. Irwin, T. Lyson, and A. Nucci. 2002. Civic community in small-town America: How civic welfare is influenced by local capitalism and civic engagement. *Rural Sociology* 67(1):90-113.

Tolbert, C. and K. Mossberger. 2006. The effects of e-government on trust and confidence in government. *Public Administration Review* 66(3):354-369.

Ulbig, S. 2003. Is having your say enough?: The importance of voice and influence in political trust and policy assessments. Conference Papers -- Northeastern Political Science Association. Pp.1-25, npsa_proceeding_16881.pdf.

Ulbig, S. and C. Funk. 1999. Conflict avoidance and political participation. *Political Behavior* 21(3):265-282.

U.S. Census Bureau. 2000. http://www.census.gov/main/www/cen2000.html. Accessed December 1, 2005.

U.S. Census Bureau. 2006. http://www.census.gov/popest/datasets.html. Accessed December 15, 2008.

Uslander, E. and M. Brown. 2005. Inequality, trust, and civic engagement. *American Politics Research* 33:868-894.

Utah History Encyclopedia. 2003. www.media.utah.edu/UHE. Accessed April 20, 2005.

Verba, S., K. Schlozman, and H. Brady. 1995. *Voice and equality.* Cambridge: Harvard University Press.

Vining, J. and A. Ebreo. 2002. Emerging theoretical and methodological perspectives on conservation behavior. In *Handbook of environmental psychology,* eds. R.B. Bechtel and A. Churchman, 541-557. New York: John Wiley.

Von Reichert, C. 2001. Returning and new Montana migrants: Socio-economic and motivational differences. *Growth and Change* 32:447-465.

Von Reichert, C. and G. Rudzitis. 1994. Rent and wage effects on the choice of amenity destinations of labor force and nonlabor force migrants: A note. *Journal of Regional Science* 34(3):445-455.

Vorkinn, M. and H. Riese. 2001. Environmental concern in a local context: The significance of place attachment. *Environment and Behavior* 33(2):249-263.

Wakefield, S., S. Elliott., and D. Cole. 2007. Social capital, environmental health and collective action: A Hamilton, Ontario case study. *Canadian Geographer* 51(4):428-443.

Wakefield, S., S. Elliott, J. Eyles, and D. Cole. 2006. Taking environmental action: The role of local composition, context, and collective. *Environmental Management* 37(1):40-53.

Walker, P. 2003. Reconsidering 'regional' political ecologies: Toward a political ecology of the rural American West. *Progress in Human Geography* 27(1):7-24.

Walters, L., J. Aydelotte, and J. Miller. 2000. Putting more public in policy analysis. *Public Administration Review* 60 (4) 349-359.

Wandersman, A., P. Florin, R. Friedman, and R. Meier. 1987. Who participates, who does not, and why? An analysis of voluntary neighborhood organizations in the United States and Israel. *Sociological Forum* 2(3):534-555.

Wang, X. and M. Wart. 2007. When public participation in administration leads to trust: An empirical assessment of managers' perceptions. *Public Administration Review* 67(2): 265-278.

Wellman, D. and R. Marans. 1983. Social conflict associated with turnaround migration: Evidence from northern Michigan. *Journal of the Community Development Society* 14(1):1-15.

White, K. and D. Hannick. 2004. Moderate environmental amenities and economic change: The nonmetropolitan northern forest of the Northeast U.S., 1970-2000. *Growth and Change* 35(1):42-60.

Wicker, A. 1969. Attitudes versus actions: The relationship of verbal and overt behavioral responses to attitude objects. *Journal of Social Issues* 25(4):41-78.

Williams, A. and P. Jobes. 1990. Economic and quality of life considerations in urban rural migration. *Journal of Rural Studies* 6(2):187-194.

Williams, T. 2006. *In the midst of a changing landscape: Residents beliefs and attitudes towards aspects of the American West.* Unpublished doctoral dissertation, Department of Sociology, Social Work and Anthropology, Utah State University, Logan.

Wolfinger, R. and S. Rosenstone. 1980. *Who votes?* New Haven: Yale University Press.

Wright, S., M. Caserta, and D. Lund. 2003. Older adults attitudes, concerns, and support for environmental issues in the New West. *The International Journal of Aging and Human Development* 57(2):151-179.

Wulfhorst, J. 2000. Collective identity and hazardous waste management. *Rural Sociology* 65(2):275-294.

Wulfhorst, J. and R. Krannich. 1999. Effects of collective morale from technological risk. *Society and Natural Resources* 12(1):1-18.

Yang, K. and K. Callahan. 2007. Citizen involvement efforts and bureaucratic responsiveness: Participatory values, stakeholder pressures, and administrative practicality. *Public Administration Review* 67(2):249-264.

APPENDICES

APPENDIX A: INFORMED CONSENT STATEMENT

LETTER OF INFORMATION

Second Home Development in Rural, Rocky Mountain Communities

Dear Resident:

Researchers from Utah State University (USU) are conducting a research study of community responses to second home development in the rural, Rocky Mountain West. This project is intended to help identify some of the challenges and opportunities that rural communities are faced with when confronted with rapid social, economic, and political change. There may be approximately 100 participants in this study. You have been recommended as someone able to offer some insight about some of the changes occurring in the Bear Lake Valley or Teton Valley as a result of population growth and development.

We hope to learn about you and your community's opinions about recent second home development and recreation-based tourism growth in the Bear Lake Valley, Utah and Idaho or Teton Valley, ID by interviewing local residents and attending local public meetings. In particular, we would like to know about your experience and/or involvement in second home development and ways in which USU can help your communities develop sustainable land management policies.

We believe there are very minimal risks associated with participation in this project. All of the data we collect will be maintained in a confidential manner and your identity and personal information, such as address or phone number, will not be shared with any other researchers, organizations, or agencies. The information you provide will help us determine whether specific community policies or activities can influence how communities respond to second home growth as well as help us generate a series of future research recommendations for the area. A summary of the findings from this study will be generated at the conclusion of the project. If you would like a copy of this summary, please contact either the student researcher or principal investigator and one will be mailed out to you.

Throughout our work, we will take steps to ensure that your identity is kept confidential. Individual respondents will be tracked using ID numbers, rather than names or other identifying information. Only the student researcher and principal investigator will have access to the code which will be destroyed at the conclusion of the study. The list that matches that ID number to a particular person will be maintained by the research assistant at USU and will not be available to any other people or organizations. Computer data sets only have numeric ID codes to identify each record, and will be password protected to prevent unauthorized use on a laptop. The code and data will be stored separately, not on the same laptop. Individual interviews will be audio-taped, pending your approval. All audio-recordings will also be stored by code number and

destroyed at the end of the study. Any reports or publications that result from the data collected in this study, or

any data we share with other researchers, organizations, or agencies, will rely on summaries and aggregated tables that cannot reveal the identity of any participating person. You will also be given the opportunity to review your written transcript after your interview. To review your transcript, contact the student researcher or principal investigator and a copy of your transcript will be mailed out to you.

Your participation in this study is entirely voluntary. You have the right to stop participation for any reason at any time without consequence. In addition, you have the right not to provide specific information or answer any questions that you feel uncomfortable sharing with us. If you decide to withdraw from this study half-way through, you will be asked if you want your data destroyed or if the researchers can keep the information collected thus far.

This research has been approved by USU's Institutional Review Board for the protection of participants in research. If you have any questions or concerns about your rights you may contact them directly by telephone at (435) 797-1821 or by mail: 9530 Old Main Hill, Logan, UT 84322-9530. If you have any questions or concerns about this study at any time, we encourage you to contact the researchers who are leading this project.

_____	_____	_____	_____
Dr. Mark Brunson	Date	Susan Wilmot	Date
Principal Investigator		Research Assistant	
ph: (435) 797-2458		ph: (435) 755-7108	
email: Mark.Brunson@usu.edu		email: slreid@cc.usu.edu	

APPENDIX B: INTERVIEW QUESTIONS

Telephone Interview Script and Questions

Hi _____. My name is Susan Wilmot. I'm a graduate student at Utah State University and I am conducting a telephone survey of seasonal and permanent resident attitudes towards tourism growth and second home development in _____.

1. Do you still own property near _____?
    a. No. Ok. Thank you for your time.
    b. Yes. Would you still be willing to answer some questions about your experiences as a homeowner in _____ Valley? The survey should take about 15 minutes to complete.
        i. No. Ok. Would you be willing to participate at a later time?
            1. Yes. What day/time should I call back? [make schedule notes]
            2. No. Ok. Thank you for your time. May I ask why you chose not to participate? [record answer, if any].
        ii. Yes. Great! Before we begin, you need to know that you have the right to stop participating in this survey for any reason at any time and you have the right not to answer any questions that you feel uncomfortable sharing with me. All of the data I collect will be maintained in a confidential manner and your identity and personal information, such as your address or phone number, will not be shared with any other researchers, organizations, or agencies.
        iii. Go to survey below.

Basic demographics:

1. How long have you owned your property in _____ Valley?
2. Do you participate in any of the following activities while at _____? [I will list several activities. Please respond to each with a yes or no to each one].
   Do you:
    a. use the lake for recreation purposes
    b. participate in other non-lake recreation activities
    c. visit other places [Yellowstone, Jackson, etc.]
    d. visit friends or family
    e. attend local events
    f. attend church
    g. spend quiet time at your property
    h. or participate in any other activities that I haven't mentioned?
3. How involved in the _____ valley community would you say you are? Not at all involved, slightly involved, involved, or very involved
4. How many seasonal residents in the community do you know?
5. How many permanent residents in the community do you know?

6. How did you get to know these seasonal and permanent residents? [homeowner's association, church, etc]

I'm going to make several statements and would like you to tell me whether you strongly disagree, disagree, agree, or strongly agree with what I say. The first statement is:

7. "Maintaining a rural, agricultural landscape is important to my enjoyment of _____ valley."
8. "I like the way _____ valley is growing and developing."
9. "I am more concerned about the availability of local services [trash, roads, etc.] than about development issues in the valley."
10. "Local officials are doing enough to manage growth effectively in the valley."
11. "Recent development has diminished the satisfaction I get from living in the _____ valley."

12. Thank you. Do you have any specific thoughts on growth in _____ valley that you would like to share with me?
13. Do you think other permanent residents feel the same way?
14. Do you think seasonal residents feel the same way about growth and development that you do?
15. Do you believe your opinions are adequately represented in _____ valley land use planning decisions? Why or why not?
16. Have you been involved in any of the following _____ valley land use planning activities in the past 6 months? [I will list several activities. Please respond to each with a yes or no to each one].
    Have you:
    a. Contacted a public official about development-related issues
    b. Worked with others in the community to deal with development-related issues
    c. Attended a public meeting
    d. Became a member of a local organization [like Bear Lake watch].
    e. Served on a local government or advisory board
    f. Voted in local elections
    g. Or participated in any other activity I haven't mentioned?
17. What are the most important issues to you as a property owner in the _____ valley?

That was the last question. Thank you for your time. I will mail you a letter in the next few days that will provide additional information about this survey as well as provide contact information if you wish to receive a final summary of results. Do you have any questions for me? Ok, then. Thanks again for your time. Have a nice day/evening.

Key Informant Questionnaire

1. Is second home growth an important issue for you/your community?
    a. If NO, what are the most important issues and why?
    b. If YES, what do you think about recent second home development affecting Bear Lake Valley?
2. How do you think your community has responded and why?
3. What actions, if any, have your local government leaders taken? Do you support or oppose them and why?
4. What actions, if any, have other community residents and/or groups taken? Do you support or oppose them and why?
5. What actions, if any, have you personally taken?
6. Have you participated in any of the following activities in the past 6 months?
    c. Attended local event
    d. Contacted public official about development-related issues
    e. Worked with others in the community to deal with development-related issues
    f. Attended public meeting
    g. Served as officer in community organization
    h. Served on local government or advisory board
7. What problems/issues still need to be addressed for your community to be able to manage growth more effectively?
    i. If they don't know, ask to rank the following for importance:
        i. Economic issues, e.g., job security, wages, maintaining agriculture base
        ii. Social issues, e.g., maintaining small-town feel, knowing your neighbors, changing social status
        iii. Political issues, e.g., increased outside involvement in political decisions
        iv. Environmental issues, e.g., increased recreation pressure on resources
        v. Community structure issues, e.g., increased traffic, service demands
        vi. Some combination
8. How can we (Utah State and community partners) help you/your community meet those research needs?
9. What is your future vision for your community?
10. Are there any questions I haven't asked that you think are important to include?

APPENDIX C: MAIL SURVEY

Community Change in Rural, Rocky Mountain Communities

A survey of landowners' attitudes and actions

In recent years, rural communities across the West have experienced significant changes as a result of population growth and development of year-round and seasonal homes. We are interested in how you and others in the region feel about the places you live, the changes that may be affecting your community, and your involvement in community affairs and activities. This survey will ask you questions about various aspects of your community, including its people, government, economy, roads, utilities and other infrastructure, and the surrounding natural areas. The goal of this project is to help rural communities better understand and respond to changes occurring throughout the region.

Who should complete this questionnaire?

This questionnaire is being sent to a random sample of Bear Lake Valley, UT and ID and Star Valley, WY residential property owners. To provide us with the most scientifically valid results, we ask that this questionnaire be completed by the member of your household (18 years of age or older) whose birthday was celebrated most recently .

Sharing your views:

- Please read all directions carefully and mark your responses clearly.
- Feel free to write any comments or explanations directly on the questionnaire. If you have any questions or concerns, contact the survey administrator, Susan Wilmot, at (435) 760-4876 or email the principal investigator, Dr. Mark Brunson, at brunsonm@cc.usu.edu.
- Please provide answers that reflect your own experiences, feelings, and beliefs.
- Please mail your questionnaire back to us using the pre-paid envelope provided.
- All of your answers will be kept confidential. This questionnaire uses an ID number, rather than your name, to keep track of surveys mailed. To ensure your privacy, please do not write your name or other identifying information on the questionnaire. To help maintain your confidentiality, your ID number will be stored separately from the data we collect and your ID number will be destroyed at the end of the survey.
- Your participation in this study is entirely voluntary. Although we believe there are very minimal risks associated with participation in this project, you have the right not to answer any questions that you feel uncomfortable sharing with us.

Thank you very much for your help!

INITIAL QUESTION: To ensure this questionnaire is relevant to you, please answer the following question.

A. Do you currently own residential property in Bear Lake Valley or Star Valley?

☐ Yes. Please turn the page and complete the rest of the questionnaire.

☐ No. I have <u>never</u> owned residential property in either valley.

(Please return the questionnaire in the envelope provided.)

☐ No. I <u>no longer</u> own residential property in either valley.

(Please turn to page 11, complete section 6, and return the questionnaire in the envelope provided.)

Section 1: Property Characteristics

This set of questions asks for background information about your residential property in Bear Lake or Star Valley.

1. How long have you owned your residential property? (If you own multiple properties, please answer based on the property you have owned the longest) _____ years

2. Where is your residential property located? (If you own multiple properties, please answer based on the property you have owned the longest).

   ☐ Rich County ☐ Lincoln County ☐ Bear Lake County

3. Why did you choose to purchase property in Rich, Bear Lake, and/or Lincoln County? Please circle the ONE response that best indicates how important each of the following reasons were to your decision.

	Not at all Important	Slightly Important	Important	Very Important	Not Applicable
I've lived here all my life.	1	2	3	4	NA
I grew up in the area, moved away, and wanted to come back.	1	2	3	4	NA
I have friends and family that live in the area.	1	2	3	4	NA
It's a good financial investment.	1	2	3	4	NA
It's a good place to raise my kids.	1	2	3	4	NA
I like the slow pace of life.	1	2	3	4	NA
I moved for job related reasons.	1	2	3	4	NA
I enjoy the recreational opportunities.	1	2	3	4	NA
I enjoy the area's natural beauty.	1	2	3	4	NA
I enjoy the area's rural atmosphere.	1	2	3	4	NA
It's an affordable place to live.	1	2	3	4	NA
It's a good place to get away from everyday life.	1	2	3	4	NA
Other (Please explain)._____	1	2	3	4	NA

4. Which of the following best describes your current residence status in the Bear Lake or Star Valley area?

   ☐ I live here year-round

   ☐ I live here more than 3 months each year

   ☐ I live here for a total of 1-3 months each year

   ☐ I visit here for a total of less than 1 month each year

   ☐ I don't ever live here (my property is not developed or used as a rental or business property only)—**Skip to Question 7**

5. Do you expect to sell your property and move from the area in the next five years?

   ☐ Definitely will move

   ☐ Probably will move

   ☐ Probably will NOT move

   ☐ Definitely will NOT move

6. Imagine that your life in Bear Lake or Star Valley changed. Please circle the ONE response that best indicates how seriously you would consider moving if each of the following changes occurred.

	Would Definitely NOT Move	Would Probably NOT Move	Would Probably Move	Would Definitely Move
Loss of job	1	2	3	4
Increased cost of living	1	2	3	4
Increased property taxes	1	2	3	4
No longer feels like a farming area	1	2	3	4
Large profit from selling property	1	2	3	4
Reduced access to public lands for recreation	1	2	3	4
Increased crowding at recreation sites	1	2	3	4
Loss of area's natural beauty	1	2	3	4
Children grow up and move away	1	2	3	4
Family and friends move away	1	2	3	4
No longer feels like a relaxing vacation spot	1	2	3	4
Other (Please explain)._____	1	2	3	4

Section 2: Community Ties

The next few questions focus on your relationships with friends, family, and neighbors in the Bear Lake or Star Valley area.

7. How many of your adult relatives live, or own a home, within an hour's drive from your property? _____ (Write in number)

8. How many of your friends live, or own a home, within an hour's drive from your property? _____ (Write in number)

9. Think of the 10 closest homes to your property. Of those neighbors, how many have you met? _____ (Write in number)

10. Thinking of your friends, your family, and any neighbors that you know, what percentage are permanent, full-time residents versus seasonal residents?

A. Friends _____ % Permanent _____ % Seasonal

B. Family _____ % Permanent _____ % Seasonal

C. Neighbors that you know _____ % Permanent _____ % Seasonal

11. Please circle the ONE response that best represents how you feel about each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I know most of the long-term, established families in Bear Lake or Star Valley.	1	2	3	4	5
Many of my friends, family, and/or relatives are business, church, or political leaders in Bear Lake or Star Valley.	1	2	3	4	5
I've met most of the year-round residents in my Bear Lake or Star Valley community.	1	2	3	4	5
I've met most of the seasonal residents in my Bear Lake or Star Valley community.	1	2	3	4	5
The other residents make me feel welcome in my Bear Lake or Star Valley community.	1	2	3	4	5

Section 3: Community Satisfaction and Beliefs

We would next like to ask you some questions about your level of community satisfaction and opinions about changes that may be occurring within the communities of Bear Lake or Star Valley.

12. Please circle the ONE response that best represents how you feel about each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I am very attached to Bear Lake or Star Valley.	1	2	3	4	5
I get more satisfaction out of being in Bear Lake or Star Valley than any other place.	1	2	3	4	5
No other place can compare to Bear Lake or Star Valley.	1	2	3	4	5
Bear Lake or Star Valley means a lot to me.	1	2	3	4	5

13. How satisfied are you with your Bear Lake or Star Valley community as a place to live? Please circle the best response.

1----------2----------3----------4

Not at all satisfied Slightly satisfied Satisfied Very satisfied

14. Are you more, less, or equally satisfied with your community compared to five years ago?

☐ More ☐ Equal ☐ Less ☐ I wasn't in this community five years ago

15. What do you think are the most important issues facing your community?_____

_____

_____

16. Please circle the ONE response that best represents how you feel about each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
I support agricultural land preservation in my community.	1	2	3	4	5
The benefits of tourism development outweigh the costs to our community.	1	2	3	4	5
There is plenty of open space still available in the community.	1	2	3	4	5
We could benefit if more people move into our community.	1	2	3	4	5
Private citizens should have the right to buy, sell, and develop land as they please without being restricted by regulations.	1	2	3	4	5
Our community cannot support additional population growth.	1	2	3	4	5
Managing growth and development will do little to control the pace of change in our community.	1	2	3	4	5
Tourism development is our only means of improving the economic condition of our community.	1	2	3	4	5
Policies are needed to manage the rate of growth and development in our community.	1	2	3	4	5
Citizens should not have the right to develop private property in ways that may negatively impact our community or the surrounding environment.	1	2	3	4	5

17. Rural communities must try to do many things with limited funds. Suppose that every household in your community was asked to pay $100 into a local improvement fund to support the following six goals. How would you like to see your contribution divided among the goals?

Goal	# Dollars Spent
Maintain traditional ranching and agricultural land production	
Improve the economic condition of the community	
Maintain a small-town feel	
Provide adequate community services	
Guide where and how new permanent homes are built	
Guide where and how new seasonal homes are built	
Total (must add up to $100)	=

Section 4: Community Participation

For the next set of questions, we are interested in your involvement in community life in Bear Lake or Star Valley.

18. How many community organizations, clubs, or civic groups are you a member of? _____ (Write in number)

19. How often do you participate in the following aspects of community life while staying in Bear Lake or Star Valley? Please circle the ONE response that best applies for each category.

	Never	Rarely	Sometimes	Often	Very Often
Property activities (e.g. maintaining your property, enjoying the view)	1	2	3	4	5
Family activities (e.g. participating in family farm activities, attending children's school events, having dinner together, holding family reunions)	1	2	3	4	5
Informal social activities (e.g. attending community events, talking or visiting with friends and neighbors, helping others in your community)	1	2	3	4	5
Formal social activities (attending church, club, or other organization meetings)	1	2	3	4	5
Political activities (e.g. attending public meetings, voting in local elections, contacting a local official, serving on a local government board)	1	2	3	4	5
Economic activities (participating in local business activities)	1	2	3	4	5
Recreation activities (e.g. sightseeing, wildlife viewing, participating in motorized or non-motorized sports)	1	2	3	4	5

20. How often do you read the articles you see written about your community's affairs and politics in local newspapers, newsletters, or other printed materials? Please circle the ONE response that best applies.

1----------2----------3----------4----------5

Never Rarely Sometimes Often Very Often

21. How often do you talk about community affairs and politics with friends, family, and/or neighbors? Please circle the ONE response that best applies.

1----------2----------3----------4----------5

Never Rarely Sometimes Often Very Often

22. Suppose you were confronted with a change that could affect you, your family, or your community. What actions, if any, would you take to address the issue? For each scenario, circle the action(s) that you would be most likely to take.

		Do nothing	Talk to friends, family, or neighbors about the issue	Contact a community leader or homeowner's association for more information	Give money to efforts that will support or oppose the change	Attend public meetings	Form or join a community group to address the issue	Take any other action (e.g. write a letter to the editor, serve on a government board, or vote on a proposed change)	Move from your community
Scenario A	A new subdivision is proposed in your community.	1	2	3	4	5	6	7	8
Scenario B	Road traffic and noise worsen in your community due to additional summer tourists.	1	2	3	4	5	6	7	8
Scenario C	Your public land access is restricted by new hillside homeowners.	1	2	3	4	5	6	7	8
Scenario D	The community plans to close a middle school due to low student enrollment.	1	2	3	4	5	6	7	8
Scenario E	Residential development in the valley reduces the quality and quantity of existing water resources.	1	2	3	4	5	6	7	8
Scenario F	County commissioners propose bringing in an ethanol plant, which some residents fear may pose a health or safety risk.	1	2	3	4	5	6	7	8
Scenario G	Your property taxes increase to cover new sewer and water lines.	1	2	3	4	5	6	7	8
Scenario H	Construction of nearby new homes reduces your views of the surrounding mountains or lake from your house.	1	2	3	4	5	6	7	8
Scenario I	Residential development in your community places a strain on existing police and ambulance services.	1	2	3	4	5	6	7	8
Scenario J	Community leaders propose a ban on further development in your area for the next five years.	1	2	3	4	5	6	7	8

23. How would the following factors influence your willingness to take action about an issue? Please circle the ONE response that best applies for each statement.

	Not at all Likely to Take Action	Somewhat Likely to Take Action	Likely to Take Action	Very Likely to Take Action
The proposed change has a direct economic cost to me.	1	2	3	4
The proposed change has a direct economic benefit to me.	1	2	3	4
I would receive some non-economic benefit (e.g. an increase in knowledge, community status, or political influence).	1	2	3	4
My family and friends will be affected by the change.	1	2	3	4
My community leaders tell me I should get involved.	1	2	3	4
My actions will benefit the community.	1	2	3	4
My actions will benefit the environment.	1	2	3	4

24. Please circle the ONE response that best represents how you feel about each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My personal actions can have a strong impact on community decisions and outcomes.	1	2	3	4	5
Local residents should play a large role in shaping community decisions and policy.	1	2	3	4	5
I have faith in our elected local officials to make good community decisions.	1	2	3	4	5
Community leaders will listen to and consider everyone's opinions before making community decisions.	1	2	3	4	5
There are plenty of opportunities for participation in my community.	1	2	3	4	5
Most of our community decisions are determined by external forces beyond the control of our local government.	1	2	3	4	5
Other members of the community expect me to participate in community affairs.	1	2	3	4	5
I trust my local political leaders to act in my best interest.	1	2	3	4	5

25. Have you participated in any of the following activities in Bear Lake or Star Valley? Check all that apply.

☐ Sold land to developers or land investment companies

☐ Provided financial support for development-related activities

☐ Built subdivisions or other residential housing units

☐ Provided any other services to support development. (Please explain). _____

26. Have you ever been asked to serve in a leadership role in Bear Lake or Star Valley? Check the ONE answer that best applies.

☐ Never ☐ Rarely ☐ Sometimes ☐ Often

27. Please circle the ONE response that best represents how you feel about each of the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
If I spoke up at a meeting, people would listen to what I had to say.	1	2	3	4	5
If I wanted to write a letter to a local official about an issue that concerned me, I could convey my point effectively.	1	2	3	4	5
I will take an action that I feel is right regardless of what others around me think.	1	2	3	4	5
I have the free time to participate in community affairs.	1	2	3	4	5

Section 5: Background Characteristics

Finally, we need to ask some questions about you and your background. These questions will be used *only* to compare the view and actions of persons with similar and dissimilar backgrounds. As with all other questions, *your responses in this section will be kept strictly confidential*.

28. What is your age? _____ years

29. Are you: ☐ Male ☐ Female

30. Which of the following best describes your household income before taxes in 2006?

- ☐ < $10,000
- ☐ $10,000-19,999
- ☐ $20,000-39,999
- ☐ $40,000-59,999
- ☐ $60,000-79,999
- ☐ $80,000 – 99,999
- ☐ $100,000 or more

31. Which of the following are significant sources of income in your household? Check all that apply.

- ☐ Wages or salary
- ☐ Income from personal business
- ☐ Investment income and/or interest
- ☐ Income from rental property
- ☐ Public assistance
- ☐ Social security payments
- ☐ Retirement pensions
- ☐ Unemployment compensation
- ☐ Disability payments
- ☐ Other (please explain) _____

32. Please describe the occupation of the primary wage earner in your family. _____

33. Which of the following best describes your current employment situation?

- ☐ Employed for pay by company/business
- ☐ Self-employed
- ☐ Unemployed, but looking for work
- ☐ Unemployed, not looking for work
- ☐ Retired
- ☐ Homemaker
- ☐ Other (please explain) _____

34. What is the highest level of education you have completed?

- ☐ Did not finish high school
- ☐ Completed high school or GED
- ☐ Some college but no degree
- ☐ Associates or vocational degree
- ☐ College bachelor's degree
- ☐ Some graduate work
- ☐ Completed graduate degree, Masters or PhD.

35. Which of the following best describes your political orientation?

☐ Republican ☐ Democrat ☐ Independent ☐ Other ☐ None

36. What is your religious orientation?

☐ LDS ☐ Jewish

☐ Catholic ☐ Other (please explain) _____

☐ Protestant ☐ None

37. What is the total number of people (including adults and children) living in your household at the present time?

_____ (Write in number)

38. How old are your children, if any? _____ (List ages)

39. What is your current marital status?

☐ Married ☐ Separated

☐ Living with partner ☐ Divorced

☐ Widowed ☐ Never married

40. What size community did you spend most of your childhood in (up to age 18)?

☐ Very small town (under 2,500 population) ☐ Medium-size city (25,000 to 100,000 population)

☐ Small town or village (2,500 to 5,000 population) ☐ Metropolitan city (over 100,000 population)

☐ Smaller city (5,000 to 25,000 population)

Thank you for your cooperation! Please remember to seal the survey in the envelope provided and mail it back to: Susan Wilmot, Utah State University, College of Natural Resources, UMC 5215 , Logan, UT 84322-5215.

APPENDIX D: STATISTICAL TESTS AND MODELS

APPENDIX D1

Attitude Bivariate Correlation Table

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Long-term resident	1.000																			
2. Bear Lake Valley	.277**	1.000																		
3. Permanent resident	.008	-.144**	1.000																	
4. Seasonal resident	.073	.272**	-.810**	1.000																
5. Non-resident	-.134**	-.208**	-.310**	-.307**	1.000															
6. Decreased satisfaction	.088	.064	.044	-.006	-.079	1.000														
7. Agricultural preservation	.078	.021	.029	-.004	-.042	.141**	1.000													
8. Capacity for growth	-.199**	-.152**	.022	-.077	.090*	-.395**	-.387**	1.000												
9. Development options	.015	.032	-.022	.010	.020	.083	.306**	-.263**	1.000											
10. Limited options	-.011	.035	-.031	.021	.018	-.090	-.255**	.306**	-.258**	1.000										
11. Community affairs	.076	.041	.281**	-.121**	-.271**	.035	.150**	-.029	.133**	-.087	1.000									
12. Development activity	.033	.005	.022	.006	-.046	.018	-.002	.001	-.034	-.002	-.047	1.000								
13. Age	.022	.035	.044	-.011	-.052	.039	-.002	-.043	-.036	-.005	-.050	.089*	1.000							

14. Female	.017	.063	-.068	.043	.041	-.021	.027	-.088	.034	.004	-.033	-.114*	-.158**	1.000						
15. Income	-.011	.007	-.032	-.016	.078	-.010	.028	.026	.006	-.006	.034	.112*	-.113*	-.069	1.000					
16. LDS	-.067	.063	.060	.000	-.099*	.046	.054	-.016	.058	-.019	-.074	.087	.136**	-.042	-.149**	1.000				
17. Rural childhood	-.095*	-.003	.078	-.094*	.026	-.038	.009	.016	-.011	.032	-.016	.050	.024	-.024	-.080	.272**	1.000			
18. Place attachment	.133**	.148**	.138**	.024	-.272**	-.054	.251**	-.092*	.104*	-.107*	.351**	-.001	-.044	-.043	-.007	-.003	-.091*	1.000		
19 Nature values	.013	.124*	-.125*	.168**	-.073	.080	.309**	-.108*	.150**	-.182**	.003	.011	.000	-.042	.034	.044	-.015	.329**	1.000	
20. Social values	.028	.114	.751**	-.570**	-.367**	-.021	.123	.348**	-.124	-.138	.504**	-.272*	.014	-.153	-.020	-.009	-.083	.528**	.312*	1.000

Participation Bivariate Correlation Table

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1. Long-term resident	1.000																								
2. Bear Lake Valley	.277**	1.000																							
3. Permanent resident	.008	-.144**	1.000																						
4. Seasonal resident	.073	.272**	-.810**	1.000																					
5. Non-resident	-.134**	-.208**	-.310**	-.307**	1.000																				
6. Political activity	.139**	.074	.528**	-.379**	-.259**	1.000																			
7. Community knowledge	.076	.041	.281**	-.121**	-.271**	.518**	1.000																		
8. Personal motivation	-.046	-.013	.031	-.025	-.010	-.009	-.004	1.000																	
9. Leadership	-.061	-.016	.126**	-.101*	-.040	.002	-.008	.178**	1.000																
10. Civic skills	.024	-.004	.078	-.072	-.009	.071	.055	.128**	.143**	1.000															
11. Free time	.03	-0.012	.096*	-.052	-.071	.011	-.018	.173**	.225**	.225**	1.000														
12. Political trust	.037	.042	.034	.002	-.059	-.034	-.062	.040	.143**	.001	.216**	1.000													
13. Community	.033	.032	.092*	-.064	-.046	.099*	.073	.563**	.213**	.218**	.311**	.076	1.000												

motivation																									
14. Efficacy	-.053	.000	.082	-.059	-.036	-.011	-.037	.297**	.377**	.276**	.550**	.408**	.429**	1.000											
15. Social connections	.193**	.159**	.490**	-.356**	-.233**	.494**	.394**	-.049	.010	-.008	-.002	.010	.124**	-.031	1.000										
16. Behavior intentions	.061	.111*	.090	-.073	-.032	.203**	.231**	.133**	.196**	.153**	.221**	.022	.278**	.234**	.158**	1.000									
17. Talk actions	.042	.074	.096	-.070	-.050	.099*	.162**	.085	.124*	.081	.110*	.048	.206**	.166**	.157**	.782**	1.000								
18. Contact actions	.004	.143**	.004	.029	-.061	.065	.141**	.169**	.185**	.087	.168**	.080	.253**	.222**	.083	.755**	.557**	1.000							
19. Money actions	-.058	.029	-.093	.067	.049	-.025	.061	.139**	.129*	.040	.090	-.010	.171**	.132*	-.073	.543**	.451**	.415**	1.000						
20. Meeting actions	.064	.089	.121*	-.107*	-.027	.255**	.229**	.090	.172**	.164**	.215**	.007	.208**	.184**	.193**	.806**	.545**	.461**	.343**	1.000					
21. Group actions	.116*	.129*	.008	.004	-.024	.187**	.213**	.099	.091	.138**	.187**	.003	.204**	.193**	.104*	.770**	.430**	.503**	.357**	.590**	1.000				
22. Subdivision	.089	.078	.043	-.033	-.016	.231**	.305**	.013	.039	.063	.094*	-.048	.145**	.065	.173**	.685**	.503**	.483**	.355**	.549**	.527**	1.000			
23. School closure	.059	.064	.325**	-.300**	-.043	.332**	.275**	-.058	.021	-.009	.067	.078	.099*	.070	.400**	.496**	.425**	.326**	.203**	.438**	.350**	.324**	1.000		
24. Water resources	.092*	.123**	.071	-.060	-.019	.199**	.241**	.027	.070	.074	.088	-.014	.169**	.072	.189**	.799**	.674**	.595**	.379**	.653**	.592**	.632**	.341**	1.000	
25. Development ban	-.075	-.011	-.020	.025	-.009	-.049	-.025	.181**	.176**	.157**	.211**	.029	.207**	.226**	.000	.428**	.318**	.326**	.247**	.361**	.351**	.060	.073	.162**	1.000

D2

Cluster Table

Table 58. Excerpt from cluster table of participation variables.

	Cluster Membership						
Variable	9 Clusters	8 Clusters	7 Clusters	6 Clusters	5 Clusters	4 Clusters	3 Clusters
22a1	1	1	1	1	1	1	1
22a2	2	2	2	2	2	2	2
22a3	3	3	3	3	3	3	2
22a4	1	1	1	1	1	1	1
22a5	4	4	4	4	2	2	2
22a6	5	5	5	5	4	4	3
22a7	6	5	5	5	4	4	3
22a8	1	1	1	1	1	1	1
22b1	1	1	1	1	1	1	1
22b2	2	2	2	2	2	2	2
22b3	3	3	3	3	3	3	2
22b4	1	1	1	1	1	1	1
22b5	4	4	4	4	2	2	2
22b6	5	5	5	5	4	4	3
22b7	6	5	5	5	4	4	3
22b8	1	1	1	1	1	1	1
22c1	1	1	1	1	1	1	1
22c2	2	2	2	2	2	2	2
22c3	3	3	3	3	3	3	2
22c4	1	1	1	1	1	1	1
22c5	4	4	4	4	2	2	2
22c6	5	5	5	5	4	4	3
22c7	6	5	5	5	4	4	3
22c8	1	1	1	1	1	1	1
22d1	7	6	3	3	3	3	2
22d2	8	7	6	6	5	2	2
22d3	9	8	7	5	4	4	3
22d4	1	1	1	1	1	1	1
22d5	9	8	7	5	4	4	3
22d6	1	1	1	1	1	1	1
22d7	9	8	7	5	4	4	3

22d8	1	1	1	1	1	1	1
22e1	1	1	1	1	1	1	1
22e2	2	2	2	2	2	2	2
2233	3	3	3	3	3	3	2
22e4	1	1	1	1	1	1	1
22e5	4	4	4	4	2	2	2
22e6	5	5	5	5	4	4	3
22e7	6	5	5	5	4	4	3

APPENDIX D2

Chapter 4 Statistical Tests

Table 59. ANOVA table results for Chapter 4 independent variables.

		Sum of Squares	df	Mean Square	F	Sig.
Place attachment	Between Groups	473.195	2	236.597	20.582	.000
	Within Groups	5644.103	491	11.495		
Nature-based values	Between Groups	97.683	2	48.842	5.539	.004
	Within Groups	3306.793	375	8.818		
Social-based values	Between Groups	1088.447	2	544.224	40.220	.000
	Within Groups	838.938	62	13.531		
Knowledge of community affairs	Between Groups	195.355	2	97.678	33.440	.000
	Within Groups	1469.246	503	2.921		

Table 60. Post-hoc test results for Chapter 4 independent variables.

Dependent Variable		(I) @4index	(J) @4index	Mean Difference (I-J)	Std. Error	Sig.
Place attachment	Tukey HSD	1	2	.43504	.32111	.366
			3	3.44451*	.53884	.000
		2	1	-.43504	.32111	.366
			3	3.00947*	.54012	.000
		3	1	-3.44451*	.53884	.000
			2	-3.00947*	.54012	.000
Nature-based values	Dunnett C	1	2	-.96500*	.31260	
			3	.25183	.68113	
		2	1	.96500*	.31260	
			3	1.21683	.65928	
		3	1	-.25183	.68113	
			2	-1.21683	.65928	
Social-based values	Dunnett C	1	2	8.45536*	.97348	
			3	8.78571*	.99382	
		2	1	-8.45536*	.97348	
			3	.33036	1.06942	
		3	1	-8.78571*	.99382	
			2	-.33036	1.06942	
Knowledge of community affairs	Dunnett C	1	2	.801*	.155	
			3	2.057*	.324	
		2	1	-.801*	.155	
			3	1.256*	.329	
		3	1	-2.057*	.324	
			2	-1.256*	.329	

***. The mean difference is significant at the 0.05 level.**

Table 61. ANOVA table results for Chapter 4 dependent variables.

		Sum of Squares	df	Mean Square	F	Sig.
Control Over Development	Between Groups	9.871	2	4.936	.774	.462
	Within Groups	3129.052	491	6.373		
Capacity for Growth	Between Groups	63.250	2	31.625	3.082	.047
	Within Groups	4884.270	476	10.261		
Limited Options	Between Groups	.554	2	.277	.104	.901
	Within Groups	1316.161	495	2.659		
Agriculture Preservation	Between Groups	.810	2	.405	.517	.597
	Within Groups	390.609	499	.783		

Table 62. Post-hoc test results for Chapter 4 dependent variables.

Dependent Variable		(I) @4index	(J) @4index	Mean Difference (I-J)	Std. Error	Sig.
Capacity for Growth	Tukey HSD	1	2	.391	.309	.415
			3	-.849	.510	.220
		2	1	-.391	.309	.415
			3	-1.240*	.512	.042
		3	1	.849	.510	.220
			2	1.240*	.512	.042

Table 63. ANOVA table results for resident willingness to pay for different community goals.

		Sum of Squares	df	Mean Square	F	Sig.
Maintain Agriculture	Between Groups	1697.254	2	848.627	2.738	.066
	Within Groups	143519.941	463	309.978		
Improve Economic Condition	Between Groups	1867.316	2	933.658	3.124	.045
	Within Groups	138072.224	462	298.858		
Small-town Feel	Between Groups	51.170	2	25.585	.132	.876
	Within Groups	89831.722	463	194.021		
Community Services	Between Groups	131.160	2	65.580	.113	.893
	Within Groups	270419.183	467	579.056		
Guide Permanent Homes	Between Groups	480.105	2	240.053	.811	.445
	Within Groups	137112.515	463	296.139		
Guide Seasonal Homes	Between Groups	4554.619	2	2277.310	11.154	.000
	Within Groups	94526.488	463	204.161		

Table 64. Post-hoc test results for resident willingness to pay for different community goals.

Dependent Variable		(I) @4index	(J) @4index	Mean Difference (I-J)	Std. Error
Maintain Agriculture	Dunnett C	1	2	4.022	1.750
			3	1.652	2.371
		2	1	-4.022	1.750
			3	-2.370	2.227
		3	1	-1.652	2.371
			2	2.370	2.227
Improve Economic Condition	Dunnett C	1	2	3.974	1.736
			3	-.321	2.154
		2	1	-3.974	1.736
			3	-4.295	2.061
		3	1	.321	2.154
			2	4.295	2.061
Guide Seasonal Homes	Dunnett C	1	2	-6.424*	1.447
			3	-.788	1.668
		2	1	6.424*	1.447
			3	5.636*	1.933
		3	1	.788	1.668
			2	-5.636*	1.933

***. The mean difference is significant at the 0.05 level.**

Table 65. Unstandardized coefficients and standard errors for OLS regressions.

	Agriculture Preservation		Capacity for Growth		Control Over Development		Limited Options	
	B	Std. Error	B	Std. Error	B	Std. Error	B	Std. Error
(Constant)	1.325	.623	13.012	2.161	9.314	1.763	7.405	1.052
Long-term residents	.195	.135	-.810	.463	.087	.382	.346	.228
Bear Lake Valley	-.158	.134	-.235	.457	.780	.377	.217	.225
Knowledgeable about community	.029	.042	.001	.148	.291	.120	-.126	.072
Development activity	-.313	.167	.414	.565	-.709	.476	-.048	.284
Female	.136	.131	-.553	.454	.004	.371	-.094	.221
Associates Degree +	-.025	.131	-.287	.457	.546	.370	-.024	.221
LDS	-.064	.133	.745	.457	.300	.375	.056	.224
Rural childhood community	.088	.131	-.685	.449	-.011	.369	-.100	.221
Age	.005	.004	.004	.016	-.018	.013	-.004	.008
Nature-based values	.095	.022	-.089	.076	.082	.063	-.157	.037
Financial-based values	-.025	.064	.651	.220	-.208	.182	.391	.108
Place attachment	.035	.021	.033	.071	-.073	.058	.009	.035
Decreased satisfaction over time	.203	.129	-2.840	.441	.470	.365	-.408	.218
Seasonal residents	.038	.136	-.963	.462	.445	.386	-.201	.230
Non-residents	-.316	.289	.596	1.037	-.211	.819	.042	.489

Table 66. T-test results for place attachment scores by length of residence.

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Place Attachment	-2.930	478	.004	-.949	.324	-1.585	-.313

Table 67. T-test results for place attachment scores by community size.

Variable	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
Place Attachment	1.952	413.375	.052	.645	.331	-.005	1.295

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Chapter 5 Statistical Tests

Table 68. ANOVA results for Chapter 5 independent variables.

		Sum of Squares	Df	Mean Square	F	Sig.
Personal Motivation	Between Groups	2.389	2	1.194	.244	.784
	Within Groups	2406.462	491	4.901		
"Greater Good"	Between Groups	35.617	2	17.809	2.133	.120
	Within Groups	4015.490	481	8.348		
Political Trust	Between Groups	20.529	2	10.265	.887	.412
	Within Groups	5437.073	470	11.568		
Personal Efficacy	Between Groups	20.040	2	10.020	1.607	.202
	Within Groups	2937.252	471	6.236		
Local Social Connections	Between Groups	1592.127	2	796.063	80.984	.000
	Within Groups	4796.993	488	9.830		
Civic Skills	Between Groups	6.598	2	3.299	1.538	.216
	Within Groups	1046.946	488	2.145		
Free Time	Between Groups	5.883	2	2.941	2.724	.067
	Within Groups	520.563	482	1.080		

Table 69. Post-hoc test for Chapter 5 independent variables.

Dependent Variable		(I) @4index	(J) @4index	Mean Difference (I-J)	Std. Error	Sig.
Local Social Connections	Tukey HSD	1	2	3.34084*	.29697	.000
			3	4.55849*	.51161	.000
		2	1	-3.34084*	.29697	.000
			3	1.21766*	.51315	.047
		3	1	-4.55849*	.51161	.000
			2	-1.21766*	.51315	.047

Table 70. ANOVA results for residency status-based differences in overall predicted involvement in community affairs.

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	305.962	2	152.981	1.608	.202
Within Groups	37389.641	393	95.139		

Table 71. ANOVA results for action type-based involvement based on residency status.

		Sum of Squares	df	Mean Square	F	Sig.
Talk about Issue	Between Groups	24.007	2	12.004	1.929	.147
	Within Groups	2439.547	392	6.223		
Contact Official	Between Groups	7.745	2	3.873	.761	.468
	Within Groups	1994.523	392	5.088		
Give Money	Between Groups	2.052	2	1.026	.562	.571
	Within Groups	715.857	392	1.826		
Attend Meeting	Between Groups	39.599	2	19.799	2.906	.056
	Within Groups	2670.781	392	6.813		
Form or Join Group	Between Groups	.787	2	.394	.114	.893
	Within Groups	1357.912	392	3.464		

Table 72. Post-hoc test results for action type-based involvement by residency status.

Dependent Variable		(I) @4index	(J) @4index	Mean Difference (I-J)	Std. Error	Sig.
Attend Meeting	Tukey HSD	1	2	.64333	.27370	.050
			3	.56891	.51226	.508
		2	1	-.64333	.27370	.050
			3	-.07442	.51645	.989
		3	1	-.56891	.51226	.508
			2	.07442	.51645	.989

Table 73. ANOVA results for issue-based action by residency status.

		Sum of Squares	df	Mean Square	F	Sig.
Subdivision Development	Between Groups	5.964	2	2.982	1.723	.180
	Within Groups	858.261	496	1.730		
School Closure	Between Groups	58.889	2	29.445	23.344	.000
	Within Groups	611.734	485	1.261		
Water Degradation	Between Groups	7.837	2	3.918	1.627	.198
	Within Groups	1180.058	490	2.408		
Development Ban	Between Groups	.846	2	.423	.202	.817
	Within Groups	1027.885	491	2.093		

Table 74. Post-hoc test results for issue-based action by residency status.

Dependent Variable		(I) @4index	(J) @4index	Mean Difference (I-J)	Std. Error
School Closure	Dunnett C	1	2	.728*	.105
			3	.459	.207
		2	1	-.728*	.105
			3	-.269	.196
		3	1	-.459	.207
			2	.269	.196

***. The mean difference is significant at the 0.05 level.**

Table 75. OLS unstandardized coefficients for predicted action-based involvement in community affairs.

Variables	Talk About Issues		Contact Officials		Attend Public Meeting		Form or Join Group	
	B	Std. Error	B	Std. Error	B	Std. Error	B	Std. Error
(Constant)	-2.214	1.754	-2.314	1.585	-4.636	1.713	-3.641	1.294
Long-term resident	.012	.334	-.237	.301	-.070	.326	.586	.246
Bear Lake Valley	.222	.343	.385	.310	.148	.335	.181	.253
Local social connections	.047	.054	.062	.049	.132	.053	.032	.040
Welcome in community	.457	.176	.127	.159	.240	.172	.077	.130
Knowledge of community affairs	.150	.097	.184	.087	.211	.094	.204	.071
Personal motivation	-.037	.084	.028	.076	-.034	.082	-.041	.062
Motivation for the greater good	.107	.074	.166	.067	.115	.072	.092	.055
Personal efficacy	.135	.082	.052	.074	.118	.080	.158	.060
Political trust	.006	.049	.024	.045	-.059	.048	-.061	.036
Leadership recruitment	.408	.352	.702	.318	.822	.344	.032	.260
Free time	-.100	.162	.096	.147	.196	.159	.089	.120
Civic skills	-.080	.114	-.040	.103	.156	.111	-.002	.084
Age	-.003	.011	-.012	.010	-.008	.010	-.006	.008
Female	.393	.328	.527	.296	.652	.320	.307	.242
Income >$60,000	.196	.327	.144	.295	.818	.319	.407	.241
LDS	.063	.330	-.065	.298	.172	.322	.661	.243
Rural childhood	.027	.318	-.315	.287	.171	.310	-.148	.234
Seasonal residents	.309	.392	.715	.355	.362	.383	.317	.289
Non-residents	.263	.684	.288	.618	.464	.668	.887	.505

Table 76. OLS unstandardized coefficients for predicted issue-based involvement in community affairs.

Variables	Proposed Subdivision		School Closure		Water Degradation		Development Ban	
	B	Std. Error	B	Std. Error	B	Std. Error	B	Std. Error
(Constant)	.020	.323	-.533	.369	.283	.338	-.004	.438
Long-term resident	.024	.061	.044	.070	.096	.064	-.109	.083
Bear Lake Valley	.053	.064	.121	.072	.101	.067	.014	.086
Local social connections	.009	.010	.033	.012	.005	.011	.016	.014
Welcome in community	.087	.032	.096	.036	.100	.033	.004	.043
Knowledge of community affairs	.080	.018	.073	.020	.057	.019	-.018	.024
Personal motivation	-.018	.016	-.029	.018	-.022	.016	.023	.021
Motivation for the greater good	.014	.013	.011	.015	.028	.014	.031	.018
Personal efficacy	.015	.015	.027	.017	.012	.016	.021	.020
Political trust	-.012	.009	.012	.011	-.003	.010	-.005	.013
Leadership recruitment	.104	.065	.030	.074	.082	.068	.152	.087
Free time	.014	.030	.015	.034	.000	.031	.016	.041
Civic skills	.004	.022	-.053	.025	-.009	.023	.023	.030
Age	-.003	.002	-.002	.002	-.004	.002	-.001	.003
Female	.033	.060	.091	.068	.030	.063	-.032	.081
Income >$60,000	.033	.061	.046	.069	.022	.064	-.009	.082
LDS	.025	.061	.157	.069	.066	.064	.021	.083
Rural childhood	-.053	.061	-.021	.068	-.073	.064	-.185	.082
Seasonal residents	.048	.071	-.263	.081	-.026	.074	.144	.096
Non-residents	.202	.114	-.036	.132	.196	.123	.179	.157

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Chapter 6 Statistical Tests

Table 77. ANOVA results for intended overall involvement based on limited options attitude score.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	708.105	4	177.026	1.860	.117
Within Groups	36838.712	387	95.190		
Total	37546.816	391			

Table 78. ANOVA results for issue-based involvement based on limited options attitude score.

		Sum of Squares	df	Mean Square	F	Sig.
Subdivision Development	Between Groups	26.717	4	6.679	3.892	.004
	Within Groups	832.353	485	1.716		
School Closure	Between Groups	13.026	4	3.257	2.383	.051
	Within Groups	654.495	479	1.366		
Water Degradation	Between Groups	33.504	4	8.376	3.515	.008
	Within Groups	1146.334	481	2.383		
Development Ban	Between Groups	4.332	4	1.083	.506	.731
	Within Groups	1014.427	474	2.140		

Table 79. Post hoc results for issue-based involvement based on limited options attitude score.

Dependent Variable		(I) @16limited_ordinal	(J) @16limited_ordinal	Mean Difference (I-J)	Std. Error
Subdivision Development	Dunnett C	1	2	.292	.270
			3	.631	.265
			4	.816	.289
			5	.762	.491
		2	1	-.292	.270
			3	.338	.134
			4	.524*	.177
			5	.470	.435
		3	1	-.631	.265
			2	-.338	.134
			4	.186	.170
			5	.132	.432
		4	1	-.816	.289
			2	-.524*	.177
			3	-.186	.170
			5	-.054	.447
		5	1	-.762	.491
			2	-.470	.435
			3	-.132	.432
			4	.054	.447
School Closure	Dunnett C	1	2	-.212	.204
			3	.036	.198
			4	.261	.197
			5	.148	.527
		2	1	.212	.204
			3	.249	.126
			4	.474*	.125
			5	.361	.505
		3	1	-.036	.198
			2	-.249	.126
			4	.225	.114
			5	.112	.502
		4	1	-.261	.197

			2	-.474*	.125
			3	-.225	.114
			5	-.113	.502
		5	1	-.148	.527
			2	-.361	.505
			3	-.112	.502
			4	.113	.502
Water Degradation		1	2	-.218	.336
	Dunnett C		3	.192	.331
			4	.486	.352
			5	.639	.527
		2	1	.218	.336
			3	.410	.160
			4	.704*	.200
			5	.857	.439
		3	1	-.192	.331
			2	-.410	.160
			4	.294	.193
			5	.447	.436
		4	1	-.486	.352
			2	-.704*	.200
			3	-.294	.193
			5	.153	.452
		5	1	-.639	.527
			2	-.857	.439
			3	-.447	.436
			4	-.153	.452

***. The mean difference is significant at the 0.05 level.**

Table 80. ANOVA results for intended involvement based on agriculture preservation attitude score.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1453.040	4	363.260	3.902	.004
Within Groups	36119.194	388	93.091		
Total	37572.234	392			

Table 81. Post-hoc test results for intended involvement based on agriculture preservation attitude score.

	(I) 16a	(J) 16a	Mean Difference (I-J)	Std. Error
Dunnett C	1	2	6.57143	4.16537
		3	3.28157	4.21937
		4	-.62269	4.17023
		5	-1.78773	4.19757
	2	1	-6.57143	4.16537
		3	-3.28986	1.20529
		4	-7.19412*	1.02005
		5	-8.35915*	1.12663
	3	1	-3.28157	4.21937
		2	3.28986	1.20529
		4	-3.90426*	1.22198
		5	-5.06930*	1.31226
	4	1	.62269	4.17023
		2	7.19412*	1.02005
		3	3.90426*	1.22198
		5	-1.16504	1.14446
	5	1	1.78773	4.19757
		2	8.35915*	1.12663
		3	5.06930*	1.31226
		4	1.16504	1.14446

*. The mean difference is significant at the 0.05 level.

Table 82. ANOVA results for issue-based involvement based on agriculture preservation attitude score.

		Sum of Squares	df	Mean Square	F	Sig.
Subdivision Development	Between Groups	28.763	4	7.191	4.217	.002
	Within Groups	833.813	489	1.705		
	Total	862.577	493			
School Closure	Between Groups	12.792	4	3.198	2.339	.054
	Within Groups	656.272	480	1.367		
	Total	669.064	484			
Water Degradation	Between Groups	21.349	4	5.337	2.224	.065
	Within Groups	1159.274	483	2.400		
	Total	1180.623	487			
Development Ban	Between Groups	23.301	4	5.825	2.791	.026
	Within Groups	997.618	478	2.087		
	Total	1020.919	482			

Table 83. Post hoc results for issue-based involvement based on agriculture preservation attitude score.

Dependent Variable		(I) 16a	(J) 16a	Mean Difference (I-J)	Std. Error
Proposed Subdivision	Dunnett C	1	2	-.125	.506
			3	-.079	.318
			4	-.426	.307
			5	-.722	.316
		2	1	.125	.506
			3	.046	.427
			4	-.301	.419
			5	-.597	.426
		3	1	.079	.318
			2	-.046	.427
			4	-.347	.146
			5	-.642*	.164
		4	1	.426	.307
			2	.301	.419
			3	.347	.146
			5	-.295	.140
		5	1	.722	.316
			2	.597	.426
			3	.642*	.164
			4	.295	.140
School Closure	Dunnett C	1	2	.357	.241
			3	.219	.183
			4	-.005	.165
			5	-.200	.172
		2	1	-.357	.241
			3	-.138	.226
			4	-.362	.211
			5	-.557	.217
		3	1	-.219	.183
			2	.138	.226
			4	-.224	.140
			5	-.419*	.149
		4	1	.005	.165
			2	.362	.211

			3	.224	.140
			5	-.195	.126
		5	1	.200	.172
			2	.557	.217
			3	.419*	.149
			4	.195	.126
Water Degradation	Dunnett C	1	2	.464	.455
			3	.182	.387
			4	-.231	.376
			5	-.320	.381
		2	1	-.464	.455
			3	-.282	.314
			4	-.695	.300
			5	-.784	.305
		3	1	-.182	.387
			2	.282	.314
			4	-.413	.182
			5	-.503	.191
		4	1	.231	.376
			2	.695	.300
			3	.413	.182
			5	-.089	.167
		5	1	.320	.381
			2	.784	.305
			3	.503	.191
			4	.089	.167
Development Ban	Dunnett C	1	2	.925	.986
			3	.823	.966
			4	.272	.969
			5	.388	.970
		2	1	-.925	.986
			3	-.102	.227
			4	-.653	.239
			5	-.537	.244
		3	1	-.823	.966
			2	.102	.227
			4	-.551*	.134
			5	-.435*	.142

4	1	-.272	.969
	2	.653	.239
	3	.551*	.134
	5	.116	.161
5	1	-.388	.970
	2	.537	.244
	3	.435*	.142
	4	-.116	.161

***. The mean difference is significant at the 0.05 level.**

Table 84. ANOVA results for intended involvement based on control over development attitude score.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1037.445	4	259.361	2.746	.028
Within Groups	36368.814	385	94.464		
Total	37406.259	389			

Table 85. Post-hoc test results for intended involvement based on control over development attitude score.

	(I) @16control_ordinal	(J) @16control_ordinal	Mean Difference (I-J)	Std. Error
Dunnett C	1	2	-1.58000	4.13196
		3	-1.02475	3.62264
		4	-4.62000	3.60144
		5	-4.35882	3.70633
	2	1	1.58000	4.13196
		3	.55525	2.31587
		4	-3.04000	2.28257
		5	-2.77882	2.44471
	3	1	1.02475	3.62264
		2	-.55525	2.31587
		4	-3.59525*	1.12275
		5	-3.33407	1.42375
	4	1	4.62000	3.60144
		2	3.04000	2.28257
		3	3.59525*	1.12275
		5	.26118	1.36891
	5	1	4.35882	3.70633
		2	2.77882	2.44471
		3	3.33407	1.42375
		4	-.26118	1.36891

*. The mean difference is significant at the 0.05 level.

Table 86. ANOVA results for issue-based involvement based on control over development score.

Control		Sum of Squares	df	Mean Square	F	Sig.
Subdivision Development	Between Groups	18.535	4	4.634	2.667	.032
	Within Groups	837.329	482	1.737		
	Total	855.864	486			
School Closure	Between Groups	8.781	4	2.195	1.581	.178
	Within Groups	656.659	473	1.388		
	Total	665.439	477			
Water Degradation	Between Groups	20.949	4	5.237	2.163	.072
	Within Groups	1155.001	477	2.421		
	Total	1175.950	481			
Development Ban	Between Groups	1.991	4	.498	.230	.921
	Within Groups	1015.201	470	2.160		
	Total	1017.192	474			

Table 87. Post hoc test results for issue-based involvement based on control over development attitude score.

Dependent Variable		(I) @16control_ordinal	(J) @16control_ordinal	Mean Difference (I-J)	Std. Error
Proposed Subdivision	Dunnett C	1	2	.279	.890
			3	.016	.879
			4	-.294	.877
			5	-.369	.882
		2	1	-.279	.890
			3	-.263	.211
			4	-.573*	.200
			5	-.647*	.223
		3	1	-.016	.879
			2	.263	.211
			4	-.310	.145
			5	-.385	.175
		4	1	.294	.877
			2	.573*	.200
			3	.310	.145
			5	-.074	.162
		5	1	.369	.882
			2	.647*	.223
			3	.385	.175
			4	.074	.162
Water Degradation	Dunnett C	1	2	.745	.837
			3	.563	.809
			4	.149	.808
			5	.228	.816
		2	1	-.745	.837
			3	-.183	.275
			4	-.597	.270
			5	-.517	.295
		3	1	-.563	.809
			2	.183	.275
			4	-.414	.165
			5	-.335	.203
		4	1	-.149	.808

		2	.597	.270
		3	.414	.165
		5	.080	.197
	5	1	-.228	.816
		2	.517	.295
		3	.335	.203
		4	-.080	.197

*. The mean difference is significant at the 0.05 level.

Table 88. ANOVA results for intended involvement based on capacity for growth attitude score.

Capacity	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	155.146	4	38.786	.398	.810
Within Groups	36054.492	370	97.445		
Total	36209.637	374			

Table 89. ANOVA results for issue-based involvement based on capacity for growth attitude score.

Capacity		Sum of Squares	Df	Mean Square	F	Sig.
Subdivision Development	Between Groups	1.898	4	.475	.270	.897
	Within Groups	819.202	467	1.754		
School Closure	Between Groups	3.371	4	.843	.611	.655
	Within Groups	633.379	459	1.380		
Water Degradation	Between Groups	5.014	4	1.253	.521	.721
	Within Groups	1112.018	462	2.407		
Development Ban	Between Groups	6.843	4	1.711	.789	.532
	Within	985.981	455	2.167		

Groups

Table 90. Cross tabulation results for attitude score frequencies for scenarios based on likelihood of action.

			No action	Action	Chi-square
Water Degradation	Capacity for Growth	1	14.3	3.3	9.943**
		2	28.6	24.7	
		3	35.7	44.7	
		4	21.4	23.9	
		5		3.5	
	Limited Options	1	28.6	5.9	26.188***
		2	14.3	42.1	
		3	32.1	37.5	
		4	21.4	12.6	
		5	3.6	2.0	
Proposed Subdivision	Control over Development	1	5.9	1.1	16.599***
		2	13.7	6.7	
		3	37.3	24.5	
		4	27.5	45.4	
		5	15.7	22.2	
	Agriculture Preservation	1		1.6	12.917**
		2	7.8	1.8	
		3	29.4	17.6	
		4	37.3	42.1	
		5	25.5	36.9	
School Closure	Control over Development	1	2.3	.8	10.474**
		2	8.6	6.0	
		3	28.2	25.2	
		4	36.4	49.6	
		5	24.5	18.4	
	Agriculture Preservation	1	.5	2.3	18.233***
		2	3.2	1.9	
		3	25.9	14.0	
		4	41.4	39.6	
		5	29.1	42.3	
Development Ban	Control over Development	1	1.9	1.6	11.437**
		2	7.4	7.6	
		3	42.6	24.1	

	4	24.1	45.1	
	5	24.1	21.5	
Agriculture Preservation	1	3.7	1.4	11.314**
	2	7.4	1.6	
	3	24.1	17.7	
	4	31.5	43.4	
	5	33.3	35.9	

Table 91. Unstandardized coefficients for issue-based involvement by attitude scores.

Variable	Proposed Subdivision		School Closure		Water Degradation		Development Ban	
	B	Std. Error	B	Std. Error	B	Std. Error	B	Std. Error
Long-term resident	-.131	.420	-.848	.479	.345	.437	-.212	.592
Bear Lake Valley	.039	.063	.033	.073	.113	.066	-.075	.089
Local social connections	.065	.066	.169	.075	.129	.069	.028	.092
Welcome in community	.013	.011	.033	.012	.008	.011	.017	.015
Knowledge of community affairs	.066	.033	.093	.038	.077	.035	.011	.047
Personal motivation	.066	.019	.064	.022	.044	.020	-.019	.027
Motivation for the greater good	-.019	.016	-.030	.019	-.034	.017	.023	.023
Personal efficacy	.013	.014	.011	.016	.030	.014	.030	.020
Political trust	.012	.016	.029	.018	.014	.016	.017	.022
Leadership recruitment	-.017	.010	.010	.011	-.008	.010	-.002	.014
Free time	.111	.066	.030	.076	.073	.069	.124	.092
Civic skills	.017	.031	.013	.035	.012	.032	.008	.043
Age	.006	.022	-.044	.026	.000	.023	.029	.031
Female	-.003	.002	-.002	.002	-.004	.002	.000	.003
Income $60,000+	.036	.064	.078	.072	.000	.066	-.022	.089
LDS	.061	.063	.047	.071	.025	.065	-.042	.087
Rural childhood	.000	.064	.128	.072	.033	.066	.037	.089
Seasonal residents	-.050	.063	-.012	.071	-.069	.066	-.193	.088
Non-residents	.056	.074	-.284	.085	-.007	.077	.143	.102
Agricultural preservation attitude	.151	.117	-.092	.137	.138	.125	.214	.165
Population growth attitude	.035	.039	.062	.044	.063	.040	.078	.055
Development control attitude	.014	.011	.025	.013	.017	.012	.004	.016
Limited options attitude	.024	.012	-.011	.014	-.010	.013	-.016	.017

APPENDIX D5

Chapter 7 Statistical Tests

Table 92. ANOVA results for loss of values by residency status.

		Sum of Squares	df	Mean Square	F	Sig.
Loss of Social-based Values	Between Groups	252.624	2	126.312	16.420	.000
	Within Groups	2684.646	349	7.692		
Loss of Nature-based Values	Between Groups	202.587	2	101.294	6.709	.001
	Within Groups	5948.486	394	15.098		

Table 93. Post-hoc test results for loss of values by residency status.

Dependent Variable		(I) @4index	(J) @4index	Mean Difference (I-J)	Std. Error	Sig.
Loss of Social-based Values	Tukey HSD	1	2	1.708*	.299	.000
			3	1.369	1.150	.460
		2	1	-1.708*	.299	.000
			3	-.340	1.154	.953
		3	1	-1.369	1.150	.460
			2	.340	1.154	.953
Loss of Nature-based Values	Tukey HSD	1	2	-1.401*	.394	.001
			3	-1.966	1.494	.387
		2	1	1.401*	.394	.001
			3	-.565	1.496	.925
		3	1	1.966	1.494	.387
			2	.565	1.496	.925

CURRICULUM VITAE

SUSAN REID WILMOT

EDUCATION

DOCTOR OF PHILOSOPHY, August 2009
Utah State University, Logan, UT
Major: Human dimensions of ecosystem science and management.
Honors: College of Natural Resources Quinney Fellowship, Utah State University Dissertation Fellowship.
Professional Activities: 2007 Chair of ISSRM Student Forum. Department Head Search Committee, 2006-2007. Ecology Center Seminar Series Search Committee, 2005-2006. Graduate Student Council, 2005. Society for Human Ecology, Member since 2005. International Association of Society and Natural Resources, Member since 2004.

MASTER OF ENVIRONMENTAL MANAGEMENT, May 2003
Nicholas School of the Environment and Earth Sciences, Duke University, Durham, NC
Honors: Nicholas School of the Environment Merit Scholarship.
Professional Activities: President, American Water Resources Association, Duke chapter, 2002-2003.

BACHELOR OF SCIENCE, *cum laude*, December 1998
Wake Forest University, Winston-Salem, NC
Major: Biology, with an Asian Studies minor.
Honors: Women in Science Scholarship for academic excellence; National Security Education Program Scholarship for Mandarin language study.
Study abroad: Capital Normal University, Beijing, China, 1998-1999.

PROFESSIONAL EXPERIENCE

Environmental Technician, SWCA, Inc., Logan, UT
Responsible for research and writing of environmental assessment, greenhouse gas emissions, public involvement, water quality, and TMDL documents. Performed literature searches, provided technical editing, statistical analysis, data management, and other related tasks as required by SWCA staff. September 2008 – Current.

NEPA Consultant, Trout of Paradise, Inc., Paradise, UT
Conducted assessment of environmental impacts for a proposed conservation easement and developed final EA document for client and funding entity. December 2007 – January 2008.

Sierra Institute Fellow, Sierra Institute for Community & Environment, Taylorsville, CA
Provided organizational support to guide education, research, and policy efforts of local watershed organization. Responsible for managing non-profit website content, writing press releases, newsletters, and other outreach materials, and developing independent research and papers for publication. Produced final technical report for the Institute analyzing the relationship between organizational structure and goal attainment for U.S. based collaborative groups. Summer 2007.

Great Basin Research Assistant, Utah State University, Logan, UT
Provided an expertise-based assessment of social science knowledge gaps in the context of landscape change and restoration in the Great Basin. Researched existing literature and categorized key issues and research needs related to resident perception of USFS land management practices. Co-authored article for publication in USFS technical report. Winter 2006 – Spring 2007.

Teaching Assistant, Inter-University Consortium for Political and Social Research (ICPSR), Ann Arbor, MI
Provided homework and laboratory exercise assistance to students taking the ICPSR short course, "Simultaneous Equation Models." Graded assignments and provided in-class and laboratory instruction support. July-August 2006.

Consultant, The Nature Conservancy, Killeen, TX
Developed and implemented mail survey for landowners adjacent to Fort Hood Military Reservation to assess attitudes toward conservation and endangered species protection, real estate-based planning alternatives, potential conservation partners, and military activities. Conducted statistical analysis, produced final technical report, and gave presentation of findings to client. September 2004-February 2005.

Research Assistant, Utah State University, Logan, UT
Designed study analyzing the adoption and diffusion of novel rangeland practices among Utah ranchers. Developed survey instrument, conducted in-person interviews, performed data analysis, and produced final technical report for funding entity. 2003-2004.

Water Quality Research Consultant, Duke Power Corporation, Huntersville, NC
Compiled a comprehensive review document of recreational boating impacts on surface water systems. Designed a theoretical model to predict boating impacts on Catawba watershed reservoirs. Performed a calibration field study to assess efficacy of model in predicting MTBE and BTEX concentrations. Gave professional presentation to senior management. Summer 2002.

Groundwater Technician, Michigan Department of Agriculture, Tawas City, MI

Organized local support for implementing water quality best management practices among lakeshore property owners and agricultural producers. Published and presented water-related educational material to media, non-profit, government, private organizations, and public schools. 1999-2001.

OTHER EXPERIENCE

Capstone Graduate Project, Utah State University
Conducted assessment of Utah and Idaho recreational users' values, vision, and attachment to newly acquired National Forest land. Developed and implemented key informant and intercept survey instruments and mapped areas of high-use, special places, and conflict. Produced final technical report to help direct future USFS planning and programmatic efforts. Fall 2004.

Molecular Toxicology Independent Researcher, Duke University
Studied the PXR gene as a pesticide biomarker for medaka fish, using PCR, DNA gel electrophoresis, cloning, and primer development. Spring 2002.

Microscopy and Cryogenic Assistant, Veterans Affair Hospital, Durham, NC
Streamlined spectra image collection, analysis, and documentation procedures. Trained in tunnel electron microscope image production, rapid MMF freezing, and cryo-sectioning technique. 2001-2002.

Assistant Radiotracker and Arachnid Taxonomist, American Museum of Natural History Southwestern Research Station, Portal, AZ, Fall 1996.

ADDITIONAL INFORMATION

Experience with MS Word, Excel, Powerpoint, Publisher, and Access, Wordperfect, ArcGIS, HLM, LISREL, STATA, SAS, SPSS, and S-Plus statistical packages, Adobe Contribute, NEPA training from the Shipley Group and SWCA.

PROFESSIONAL PRESENTATIONS

Society of Human Ecology Conference. September 11, 2008. Presented "Us vs. Them: Integrating Holiday Homeowners into the rural Rocky Mountain West."

Western Recreation and Resource Management Conference. October 29, 2005. Presented "Conservation Attitudes of Rural Landowners near Fort Hood, TX."

Society of Human Ecology Conference. October 15, 2005.

Presented "Challenges to the Application of Behavioral Principles on Public Lands: A Case Study in Rich County, UT."

Society of Range Management Conference. February, 2005.
Presented "Collaborative Ranching: An Oxymoron or a Strategy for Success?"

PUBLICATIONS

Wilmot, Susan, and Mark Brunson. Public perceptions of land management in the Great Basin. In J.C. Chambers, N. Devoe and A. Evenden, eds., Collaborative Management and Research in the Great Basin: Examining the Issues and Developing a Framework for Moving Forward. General Technical Report, Rocky Mountain Research Station, Fort Collins, CO.